

Department for Work and Pensions

Research Report No 435

The impact of Pathways to Work

Helen Bewley, Richard Dorsett and Getinet Haile

A report of research carried out by the Policy Studies Institute on behalf of the Department for Work and Pensions

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Contents

Acknowledgements	ix
The Authors	x
Abbreviations and acronyms	xi
Summary	1
1 Introduction	7
1.1 The policy background	7
1.2 The Pathways programme	7
1.3 The evaluation of Pathways	9
1.4 Existing evidence on the effect of Pathways	10
1.5 Report outline	12
2 Data	13
2.1 Overview of data used	13
2.2 The survey data	14
2.2.1 <i>Variables captured in the survey</i>	14
2.2.2 <i>Timing issues and identification of the samples</i>	15
2.3 The administrative data	19
2.3.1 <i>Overview of National Benefits Database</i>	19
2.3.2 <i>Variables available in National Benefits Database</i>	19
3 Description of the pilot area population	21
3.1 Regional distribution	21
3.2 Personal characteristics	22
3.3 A description of the outcomes	26
3.3.1 <i>Survey data</i>	26
3.3.2 <i>Administrative data</i>	29

4	Methodology	33
4.1	The evaluation problem	33
4.2	Difference-in-differences	33
4.2.1	<i>An overview of the approach</i>	33
4.2.2	<i>Assumptions underlying DiD</i>	36
4.2.3	<i>Testing the counterfactual in the October 2003 areas</i>	38
4.2.4	<i>Testing the counterfactual in the April 2004 areas</i>	40
4.2.5	<i>Implications for the analysis</i>	42
5	Results	47
5.1	The effect of Pathways on employment	47
5.2	The effect of Pathways on earnings	52
5.3	The effect of Pathways on incapacity benefits receipt	53
5.4	The effect of Pathways on employment and incapacity benefits combined	55
5.5	The effect of Pathways on health	57
6	Subgroup analysis	61
6.1	Effects of Pathways by sex	62
6.2	Effects of Pathways by age	66
6.3	Effects of Pathways by nature of health problem	71
6.4	Effects of Pathways by presence of dependent children	76
7	Conclusion	79
	Appendix A Results for October 2003 areas	87
	Appendix B List of publications from the evaluation	93
	References	95

List of tables

Table 2.1	Length of time between first and final interviews	18
Table 2.2	Numbers sampled and interviewed	18
Table 3.1	Distribution of pilot population by district	22
Table 3.2	Personal characteristics of the pilot area population	24
Table 3.3	Type of mental health problem among the pilot population recorded as having a 'mental or behavioural disorder'	25
Table 3.4	Benefit status of the pilot population at first interview	26
Table 3.5	Employment status of the pilot population at final interview ...	27
Table 3.6	Average net monthly earnings of those in work at final interview	28
Table 3.7	Benefit status of the pilot population at final interview	29

Table 3.8	Health status of the pilot population at final interview	29
Table 4.1	An illustration of the DiD estimator using observed employment at time of final survey interview, April 2004 areas	34
Table 5.1	Estimates of the effects of Pathways on employment outcomes at time of interview, April 2004 areas	49
Table 5.2	Estimate of the effects of Pathways on net monthly earnings at time of interview, April 2004 areas	52
Table 5.3	Estimates of the effects of Pathways on incapacity benefits receipt at time of interview, April 2004 areas	53
Table 5.4	Effect of Pathways on receipt of incapacity benefits – summary measures for April 2004 areas	55
Table 5.5	Estimates of the effects of Pathways on combined employment/incapacity benefits status at time of interview, April 2004 areas	56
Table 5.6	Characteristics of those not working and not receiving incapacity benefits at the time of outcome interview	57
Table 5.7	Estimates of the effects of Pathways on self-reported health at time of interview, April 2004 areas	59
Table 6.1	Estimates of the effects of Pathways on outcomes measured at time of final interview, April 2004 areas – results by sex	62
Table 6.2	Summary of estimated effects of Pathways on incapacity benefits, April 2004 areas – results by sex	63
Table 6.3	Estimates of the effects of Pathways on outcomes measured at time of final interview, April 2004 areas – results by age	66
Table 6.4	Summary of estimated effects of Pathways on incapacity benefits, April 2004 areas – results by age	71
Table 6.5	Estimates of the effects of Pathways on outcomes measured at time of final interview, April 2004 areas – by whether main condition involves mental illness	72
Table 6.6	Summary of estimated effects of Pathways on incapacity benefits, April 2004 areas – results by whether main condition is a mental or behavioural disorder	76
Table 6.7	Estimates of the effects of Pathways on outcomes measured at time of final interview, April 2004 areas – by presence of dependent children	77
Table A.1	Estimates of the effects of Pathways on employment outcomes, October 2003 areas	88
Table A.2	Estimate of the effects of Pathways on net monthly earnings, October 2003 areas	88
Table A.3	Estimates of the effects of Pathways on incapacity benefits receipt and combined employment/incapacity benefits status, October 2003 areas	88

Table A.4	Estimates of the effects of Pathways on self-reported health, October 2003 areas	89
Table A.5	Effect of Pathways on receipt of incapacity benefits receipt – summary measures for October 2003 areas	91

List of figures

Figure 1.1	Six month off-flow rates from incapacity benefits	10
Figure 2.1	Timing of the incapacity benefits enquiries from which survey samples were drawn	16
Figure 3.1	Employment of the pilot population by month since incapacity benefits enquiry	28
Figure 3.2	Incapacity benefits status of the pilot population by month since start of claim	30
Figure 3.3	JSA status of the pilot population by month since start of claim	31
Figure 4.1	Definition of the cohorts of new incapacity benefits claims used for the pre-programme tests	38
Figure 4.2	Tests of the counterfactual estimates of incapacity benefits receipt in October 2003 areas in the period one year before the introduction of Pathways	39
Figure 4.3	Tests of counterfactual estimates of incapacity benefits receipt in October 2003 areas in the period two years before the introduction of Pathways	40
Figure 4.4	Tests of counterfactual estimates of incapacity benefits receipt in April 2004 areas in the period one year before the introduction of Pathways	41
Figure 4.5	Tests of counterfactual estimates of incapacity benefits receipt in April 2004 areas in the period two years before the introduction of Pathways	41
Figure 4.6	Tests of counterfactual estimates of incapacity benefits receipt in April 2004 areas in the period one year before the introduction of Pathways for those starting a claim immediately prior to the introduction of Pathways	42
Figure 5.1	Estimates of the effect of Pathways on the probability of being employed by month, April 2004 areas	51
Figure 5.2	Impact of Pathways on being off incapacity benefits by month, April 2004 areas	54
Figure 6.1	Estimates of the effect of Pathways on the probability of being employed by month, April 2004 areas – results by sex	63
Figure 6.2	Estimates of the effect of Pathways on the probability of not claiming incapacity benefits by month, April 2004 areas – men	64

Figure 6.3	Estimates of the effect of Pathways on the probability of not claiming incapacity benefits by month, April 2004 areas – women	65
Figure 6.4	Estimates of the effect of Pathways on the probability of being employed by month, April 2004 areas – results by age	68
Figure 6.5	Estimates of the effect of Pathways on the probability of not claiming incapacity benefits by month, April 2004 areas – under-50s	69
Figure 6.6	Estimates of the effect of Pathways on the probability of not claiming incapacity benefits by month, April 2004 areas – aged 50 plus	70
Figure 6.7	Estimates of the effect of Pathways on the probability of being employed by month, April 2004 areas by whether main condition involves mental illness	73
Figure 6.8	Estimates of the effect of Pathways on the probability of not claiming incapacity benefits by month, April 2004 areas – claimants with no recorded mental or behavioural disorder	74
Figure 6.9	Estimates of the effect of Pathways on the probability of not claiming incapacity benefits by month, April 2004 areas – claimants with recorded mental or behavioural disorder	75
Figure 6.10	Estimates of the effect of Pathways on the probability of being employed by month, April 2004 areas – by presence of dependent children	78
Figure A.1	Impact of Pathways on being off incapacity benefits by month, October 2003 areas	90

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Abbreviations and acronyms

ADF	Advisers' Discretionary Fund
BIS	Business Information Systems
CMP	Condition Management Programme
DiD	Difference-in-differences
DWP	Department for Work and Pensions
GMS database	Generalised Matching Service database
IB	Incapacity Benefit
IBPA	IB Personal Adviser
Incapacity benefits	Incapacity Benefit or Income Support claimed on the grounds of disability
IWS	In-Work Support
IS	Income Support
JSA	Jobseeker's Allowance
NBD	National Benefits Database
NDDP	New Deal for Disabled People
PCA	Personal Capability Assessment
RTWC	Return to Work Credit
WFI	Work Focused Interview

Summary

The Pathways to Work package of reforms ('Pathways', for short) is aimed at encouraging employment among people claiming incapacity benefits. Introduced on a pilot basis in three Jobcentre Plus districts in October 2003 and four further districts in April 2004, it requires most new claimants to attend a series of Work Focused Interviews (WFIs).¹ Participants become eligible for increased financial and non-financial support which aims to encourage a move into paid employment.

The evaluation of Pathways is being carried out by a consortium of research organisations using both quantitative and qualitative techniques to examine various aspects of the reforms. This report presents the results of evaluating the overall effect of Pathways. As such, it builds on the early findings presented in Adam *et al.* (2006) in three main ways:

- it focuses on individuals making an incapacity benefits claim some time after Pathways was introduced and so should capture the effects of Pathways once it has been operational for some time;
- it considers longer-term outcomes;
- it estimates effects using both survey data and administrative data – this allows for a more detailed analysis of benefit outcomes and also for the assumptions underlying the evaluation approach to be examined.

The evaluation follows a 'difference-in-differences' (DiD) approach. This involves comparing the change in an outcome of interest among individuals in pilot areas before and after the introduction of Pathways with the corresponding change among individuals in a set of similar-looking comparison areas. The difference between the two before-after differences provides an estimate of the effect of Pathways. Estimation is performed using regression techniques so that the effects of observed characteristics on outcomes can be controlled for, ensuring that individuals in Pathways areas are implicitly compared with similar individuals in the comparison areas.

¹ Since then, Pathways has been expanded to cover more districts so that by December 2006 it covered 40 per cent of the country.

The survey data are drawn from samples of individuals making an initial enquiry about claiming incapacity benefits before and after the introduction of Pathways. The 'post-Pathways' sample was drawn from those getting in touch with a Contact Centre to enquire about claiming incapacity benefits in the period August – November 2004. All impacts estimated using the survey data relate to individuals making an enquiry in this period. Outcome interviews were carried out roughly a year and a half later in the pilot areas and in a number of comparison areas selected to resemble the pilot areas in terms of economic and social characteristics. The outcomes considered include employment, earnings, incapacity benefits receipt and self-reported health status. The effects on incapacity benefits receipt were also examined using administrative data.

Tests using the administrative data provided the important result that the estimates based on survey data in the October 2003 areas may be unreliable. In view of this, the main focus for the survey data results is on the April 2004 areas. The analysis based on administrative data is valid in both the October 2003 and April 2004 areas.

The main results of the analysis relate to the April 2004 areas and were:

- Pathways significantly increased the probability of being employed about a year and a half after the initial incapacity benefits enquiry by 7.4 percentage points. Without Pathways, it is estimated that 29.7 per cent of individuals would have been in work (Table 5.1).² This employment effect was quite stable over the latest six or so months observable (Figure 5.1).
- The small sample size of those in work and with earnings information at the time of the outcome interview reduced the likelihood of detecting an impact on earnings. No statistically significant impact of Pathways on monthly net earnings about a year and a half after the initial incapacity benefits enquiry was found (Table 5.2). It is not possible with the survey data to observe earnings between the time of the initial enquiry and the outcome interview; it is possible that there may have been an earnings effect during this period. In view of the employment effect of Pathways, one would expect a positive impact on earnings.
- The effect of Pathways on incapacity benefits receipt about a year and a half after the initial incapacity benefits enquiry was small and not statistically significant (Table 5.3). Estimates based on administrative data were of a reduction of 1.5 percentage points in the probability of claiming incapacity benefits a year and a half after the start of claim, from a base of 52 per cent (Figure 5.2). Using administrative data, it was possible to look at the effect on incapacity benefits for each month following start of claim. This showed that Pathways reduced incapacity benefits receipt by a maximum of 6.3 percentage points five months after the start of the claim (from a base of 80 per cent). The seemingly stable long-term effect of 1.5 to two percentage points was reached in month ten.

² This summary contains references to tables and charts which appear in the main report only.

- To try and reconcile the findings of a positive employment effect with the smaller effect on incapacity benefits receipt, the effect of Pathways on combined employment and incapacity benefits status was examined. Pathways increased the probability of **working** and **not** receiving incapacity benefits a year and a half after the enquiry (Table 5.5) by 8.7 percentage points. This was mostly accounted for by a decrease of 6.9 percentage points in the probability of **not working** and **not** receiving incapacity benefits. Taken together, these results suggest that Pathways increased the likelihood of work among those not receiving incapacity benefits a year and a half after the original incapacity benefits enquiry.
- Pathways was not found to have a statistically significant effect on the probability of individuals stating that they had a health condition or disability that limited their ability to carry out their everyday activities. Pathways did, however, significantly reduce the probability of respondents reporting that they had a health condition or disability that limited their ability to carry out their everyday activities 'a great deal' by 10.8 percentage points from a base of 49.8 per cent (Table 5.7). It is possible that this outcome is partly influenced by changes in how individuals report their health due to moving into work rather than changes in the nature of their medical condition or in the extent to which impairment limits their activities.
- The effects of Pathways were also estimated for population subgroups. Such estimates are based on smaller sample sizes. This reduces the precision of estimates and makes it more difficult to detect statistically significant effects. It should be noted that the comparisons across subgroups do not control for differences in composition between the two subgroups. Consequently, while the results can show that Pathways had a greater effect on some subgroups than others, this difference is not directly attributable to the characteristic that identifies the subgroup. With these caveats in mind, the following differences were found:
 - Pathways appeared to have stronger employment effects on women than men. On the other hand, the proportion reporting their ability to carry out everyday activities was limited 'a great deal' by their health condition or disability was reduced most significantly amongst men (Table 6.1). The effect on incapacity benefits receipt was stronger for men than for women (Table 6.2).
 - There were stronger effects on employment and incapacity benefits receipt among those aged under 50 than those aged 50 or over (Table 6.3, Table 6.4). Pathways also reduced the probability of individuals aged under 50 reporting their ability to carry out everyday activities was limited 'a great deal' by their health condition or disability. There was no such effect among those aged 50 or over.
 - Pathways had little effect on the employment or self-reported health of those whose main health condition at the time they were first interviewed involved mental illness (Table 6.5). For both outcomes, it is among those whose original health condition did not involve mental illness that we were able to identify a significant Pathways impact. However, Pathways increased the probability of those with mental health problems moving away from incapacity benefits to a similar extent as for those without a mental health problem (Table 6.6).
 - Pathways appeared to have a stronger employment effect on those with dependent children (Table 6.7).

Although the timing of the outcomes considered differs from that in Adam *et al.* (2006), the direction of the main results is broadly similar for the April 2004 areas in finding an effect on employment but not finding a statistically significant effect on earnings, incapacity benefits receipt or self-reported health at the time of the final interview. Comparison of the sub-group results with those in Adam *et al.* (2006) is complicated by the fact that the subgroup analysis in that early report was based on the October 2003 and April 2004 areas combined.

Overall, the results are encouraging in that they suggest Pathways continues to have a positive impact on employment and, furthermore, that this impact may be sustained.

It should be noted that, while an effect of Pathways on employment was found, the type of employment encouraged by Pathways will not always be full-time. Those claiming incapacity benefits may face particular constraints on the amount of work they are able to do. Some health conditions or disabilities may limit individuals' ability to work more than a small number of hours per week. Other individuals will have caring responsibilities which similarly prevent them from working more than a small number of hours per week. Another factor to consider is the Permitted Work rules which encourage work of less than 16 hours per week.³ Under Pathways, Incapacity Benefit Personal Advisers (IBPAs) promoted permitted work for incapacity benefits claimants.

The results have shown that Pathways reduced the probability of claiming incapacity benefits in the first six months following the start of the claim and that this effect slowly declined thereafter to a sustained level of about 1-1½ percentage points. One potential explanation may be that most exits are the result of the WFI which generally take place within the early months of a claim. It is also perhaps consistent with the structure of Pathways that exits from incapacity benefits should be concentrated in the first six months or so after the claim starting, if the accelerated PCA results in those disallowances from incapacity benefits occurring earlier. Although the estimated effect on incapacity benefits receipt declines over time, the fact that Pathways has an effect on the probability of employment that persists beyond the point at which the effect on benefits has largely disappeared, provides support for the belief that Pathways does not merely serve to bring about a situation

³ The Permitted Work rules allow incapacity benefits claimants to be employed in a job paying up to £20 a week. They can also work for less than 16 hours a week (on average) for up to a year so long as earnings do not exceed £86 a week. An important point though is that for those on Incapacity Benefit (IB), such earnings have no effect on the amount of benefit paid, while for those claiming Income Support (IS), any earnings over £20 are counted against benefit entitlement. Such employment can last beyond one year as long as an individual is receiving support in employment from a recognised provider or is assessed as having a sufficiently severe condition or disability that they meet the criteria for exemption from the Personal Capability Assessment (PCA).

that would have arisen regardless but that it alters the nature of exits from benefit, and subsequent changes in labour market status, in a meaningful way, such that a higher proportion of those no longer receiving incapacity benefits are in work.

Finally, it should be noted that while this report presents the findings for the overall effect of Pathways on new claimants in the original pilot areas, other analyses underway as part of the broader evaluation programme will add to these results in important ways. These include investigations of the effect of particular components of the Pathways package; consideration of how the effects may generalise to areas where Pathways does not yet operate; an assessment of the extent to which Pathways may have indirect or 'spillover' effects on other people; and an evaluation of the effect of the extension of Pathways to those individuals who already had an incapacity benefits claim at the time Pathways was introduced for new claimants. The net benefit of the programme is being rigorously examined through a detailed cost-benefit analysis. In addition, a separate evaluation of the expansion of Pathways to new areas is also being carried out.

1 Introduction

1.1 The policy background

The Pathways to Work package of reforms ('Pathways', for short) is aimed at encouraging employment among people claiming incapacity benefits; that is, people claiming Incapacity Benefit (IB) or Income Support (IS) on the grounds of disability. Based on proposals outlined in the 2002 Department for Work and Pensions (DWP) Green Paper 'Pathways to Work: helping people into employment', these reforms were introduced on a pilot basis in three Jobcentre Plus districts in October 2003. Four further districts became part of the pilot in April 2004. Since then, Pathways has expanded to cover more districts, so that by December 2006 it covered 40 per cent of the country. By April 2008, all new incapacity benefits claimants in Britain will be eligible for Pathways. Existing claimants are free to participate in Pathways on a voluntary basis. In addition, mandatory participation for existing claimants is being piloted in the original seven Jobcentre Plus districts.

Pathways was introduced as a response to the large increase in the numbers claiming incapacity benefits. At the time of the 2002 Green Paper, there were roughly 2.7 million claimants; more than the combined total number of unemployed people claiming Jobseeker's Allowance (JSA) and lone parents claiming IS. The overwhelming majority of people starting an incapacity benefits claim expect to work again (Woodward *et al.*, 2003). Many do – in 2004, almost 60 per cent left benefit within a year. However, for those who remain on benefit beyond this point, the chances of leaving declines markedly – 29 per cent will still be claiming after another eight years (see the 2002 Green Paper for further details). A key aim of Pathways is to intervene early so as to reduce the incidence of prolonged benefit dependency.

1.2 The Pathways programme

Under Pathways, an individual aged between 18 and 60 making a claim for incapacity benefits must attend an initial Work Focused Interview (WFI) eight weeks after making their claim. Failure to comply with this requirement can result in

benefits sanctions. Most people remaining on incapacity benefits must attend five further WFIs.⁴ There are two groups of people for whom this is not required: those with particularly severe medical conditions and those judged likely to return to work without additional help. However, they can still participate on a voluntary basis. WFIs are carried out by specially trained IB Personal Advisers (IBPAs).

Those exempted on the basis of the severity of their medical condition are identified through the Personal Capability Assessment (PCA). Under Pathways, the aim is to fast-track this process to take place within 12 weeks of making the initial claim so the results are available by the time of the second WFI.⁵ Those with the most extreme illness or disability are exempted from the PCA process itself in addition to the WFIs. Those exempted from further mandatory participation on the grounds that they are more likely to return to work without the need for any assistance are identified during the first WFI using the 'screening tool'. This consists of a questionnaire, the answers to which are used to rate the probability of an unassisted return to work within 12 months.

Participation in all other provision available under Pathways is voluntary. There are several elements:

- The '**Choices**' package offers a range of new and existing programme provision aimed at improving labour market readiness and opportunities. The two main programmes within Choices are the New Deal for Disabled People (NDDP) and the Condition Management Programme (CMP). The CMP is a new initiative, run in collaboration with local health providers, with the aim of helping individuals to manage their disability or health condition. A number of smaller existing schemes are also available.⁶
- The **Return to Work Credit** (RTWC) offers customers who find work of at least 16 hours a week, a weekly payment of £40 for a year if their gross annual earnings are below £15,000.
- **In-Work Support** (IWS) is a programme of provision to complement the support provided by IBPAs and NDDP Job Brokers. It is contracted-out to providers and includes one or more of the following: mentoring, a job coach, occupational health support, in-depth support, financial advice/debt counselling and an aftercare service.
- The **Advisers' Discretionary Fund** (ADF) allows IBPAs to make awards of up to £100 per individual to support activities or purchases to increase the chances of finding work.

⁴ In non-Pathways areas, new incapacity benefits claimants must attend a single WFI.

⁵ In practice, the aim of a PCA within 12 weeks is not often achieved.

⁶ These include: Work-Based Learning for Adults (in England); Training for Work (Scotland); Programme Centres; Work Trials; Work Preparation; Workstep; and Access to Work.

1.3 The evaluation of Pathways

The evaluation of Pathways is being carried out by a consortium of research organisations led by the Policy Studies Institute and including the Institute for Fiscal Studies, Mathematical Policy Research, the National Centre for Social Research, the Social Policy Research Unit and David Greenberg of the University of Maryland. The evaluation is multi-faceted and involves qualitative analyses, large-scale quantitative surveys, impact analyses, cost-benefit analyses and a literature review of relevant programmes in the USA.

The focus in this report is on the overall impact of Pathways on the labour market and health outcomes of new claimants within the original seven Jobcentre Plus districts. As noted already, in three of these areas – Renfrewshire, Inverclyde, Argyll and Bute; Bridgend, Rhondda, Cynon and Taff; and Derbyshire – Pathways was introduced in October 2003. In a further four areas – Essex; Gateshead and South Tyneside; East Lancashire; and Somerset – Pathways was introduced in April 2004. In the remainder of this report, we refer to these as the ‘October 2003’ and the ‘April 2004’ areas respectively.

The specific question addressed in this report is whether, and by how much, the outcomes considered were affected by Pathways. To make causal statements of this kind requires an analytical framework that goes beyond a simple comparison of those eligible for Pathways with those not eligible, and aims instead to explicitly estimate what the outcome of those eligible for Pathways would have been had Pathways not been introduced – the so-called ‘counterfactual’. The difference between the actual and counterfactual outcomes provides the estimate of the effect of Pathways. The approach followed in this report amounts to estimating the counterfactual outcome for a point in time after the introduction of Pathways as the actual outcome observed in the pilot areas for a point in time prior to the introduction of Pathways, uprated according to the trend in outcomes over the same two periods observed in a set of similar-looking comparison areas. The validity of this approach rests on an assumption that, in the absence of Pathways, outcomes in the pilot areas would have changed in a similar way to outcomes in the comparison areas. It also requires that Pathways only had an effect on those in the pilot areas after it was introduced. The evaluation approach and the underlying assumptions are discussed in detail in Chapter 4.

The overall evaluation has already resulted in a number of reports.⁷ Of particular relevance, Adam *et al.* (2006) carried out an impact analysis for a cohort of individuals making a claim for incapacity benefits shortly after the introduction of Pathways. The intention of this was to provide early evidence on the effect of

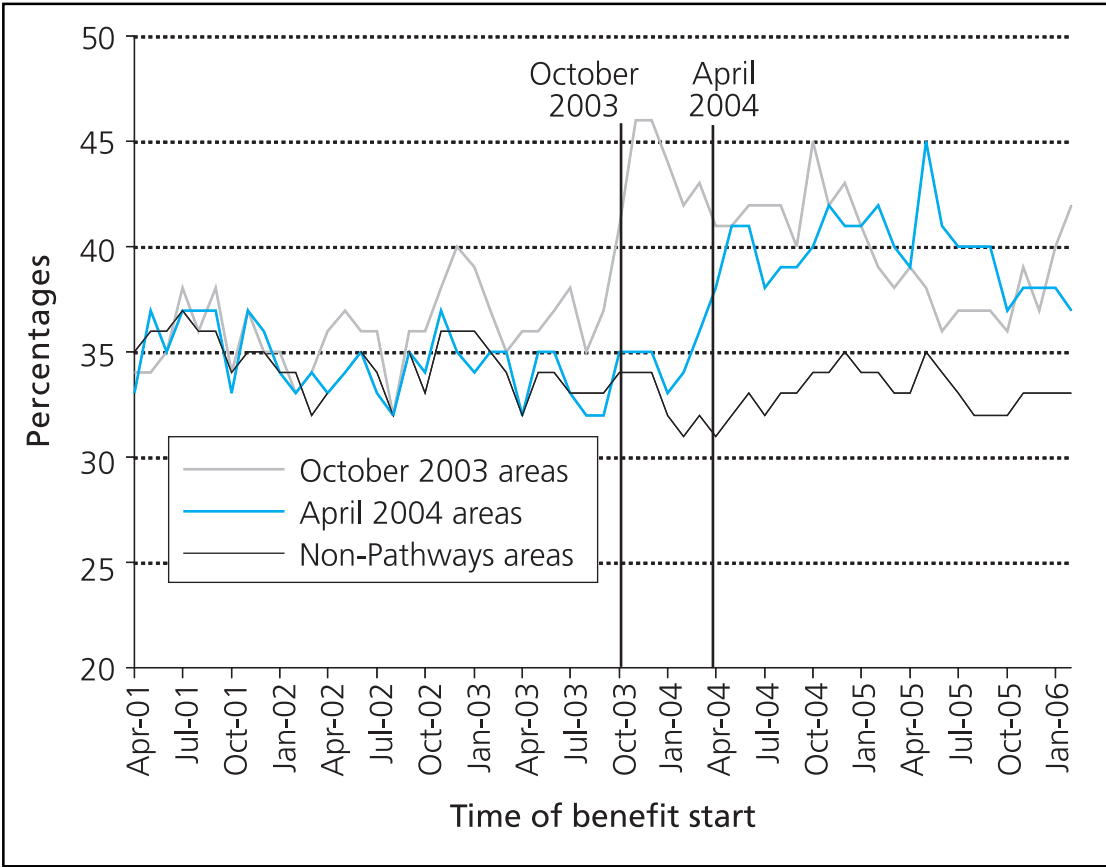
⁷ All aspects of the evaluation will be considered in a synthesis report to be produced following completion of the analysis for new claimants in the original seven Jobcentre Plus districts. A list of published reports to date is provided in Appendix B.

Pathways. In contrast, the analysis in the current report considers a cohort of individuals making an incapacity benefits claim some time after Pathways was introduced. It is possible that the delivery of Pathways would take some time to settle down after its introduction. Considering a cohort of individuals commencing an incapacity benefits claim once Pathways has had an opportunity to take effect, therefore, increases the chances that the resulting estimated effects capture the ‘steady-state’ impact of Pathways. Other contributions of the analysis in the current report are that longer-term outcomes are considered – outcomes over a period of about one and a half years are observed – and that results are based on both survey and administrative data.

1.4 Existing evidence on the effect of Pathways

Early analysis of administrative data by DWP had shown that off-flows from incapacity benefits had increased noticeably following the introduction of Pathways. Figure 1.1 shows the proportion of incapacity benefits claimants recorded as exiting their benefit within six months. The increases for those in both the October 2003 areas and the April 2004 areas follow shortly after Pathways was introduced locally. The increase of around eight percentage points in the six-month off-flow rate has been influential in shaping expectations of a sizeable effect of Pathways.

Figure 1.1 Six month off-flow rates from incapacity benefits



Adam *et al.* (2006) used survey data to evaluate the early impact of Pathways on a wider range of outcomes than those observed in the administrative data. The timing of the surveys was such that the evaluation results relate to outcomes observed about 10½ months after individuals made an enquiry about incapacity benefits. The main results were that Pathways was found to:

- increase the probability of being employed by 9.4 percentage points (from 22.5 per cent);
- increase monthly earnings by £72 (from £172);
- reduce the probability of claiming incapacity benefits by 8.2 percentage points (from 57.6 per cent);
- reduce the probability of reporting a health problem by 2.9 percentage points (from 91.4 per cent);
- increase the proportion working since the time of initial enquiry by 9.3 percentage points (from 32.9 per cent).

There were two additional findings from the early analysis that will prove relevant for the current report: First, while Pathways increased employment and reduced incapacity benefits receipt, there was some evidence that it was not the same groups of people experiencing both effects. That is, while the **overall** impacts on employment and benefit receipt were roughly equal in magnitude, when results were examined separately for sub-groups of customers, such as those aged over or under 50, there were noticeable differences. Second, the early analysis found that there were differences between the October 2003 and April 2004 areas in the effect of Pathways. Specifically, there was some evidence that the impact of Pathways was greater in the October 2003 areas than in the April 2004 areas. The results for the April 2004 areas are of particular relevance since these areas provide the focus for the current report, for reasons that are discussed in Chapter 4. Adam *et al.* (2006) provide the following estimates of the effects of Pathways in the April 2004 areas:

- an increase in the probability of being employed of 6.1 percentage points;
- an increase in the proportion working since the time of initial enquiry of 6.3 percentage points;
- no statistically significant effect on monthly earnings;
- no statistically significant effect on the probability of receiving incapacity benefits;
- no statistically significant effect on the probability of reporting a health problem.

1.5 Report outline

Chapter 2 describes the data used in the analysis, whilst Chapter 3 gives an overview of the characteristics of those eligible for Pathways in the original seven Jobcentre Plus districts. In Chapter 4, the methodological approach is presented and the results of the analysis are given in Chapter 5. Chapter 6 considers the extent to which the results vary between particular subgroups. Finally, Chapter 7 contains a discussion of the results and the conclusions which can be drawn from the research.

2 Data

2.1 Overview of data used

This evaluation made use of both survey data and administrative data. The advantage of working with survey data is that, since they were collected for the express purpose of understanding the impact of Pathways, they provide information on a rich set of outcomes and a comprehensive range of factors likely to influence the effectiveness of Pathways. With administrative data, fewer background and outcome variables are available. However, administrative data offer the important advantage of maximising the number of cases available for analysis. Furthermore, using administrative data avoids the possibility of non-response and recall biases that may affect survey data. Finally, administrative data for the population of incapacity benefits claimants were available back as far as 1999 so it was possible to use these data to carry out tests of the assumptions underlying the evaluation approach.

While the methodological approach is covered in Chapter 4, it should be noted for the purposes of the discussion in this chapter, that it guided the data requirements for the evaluation. Specifically, the analysis relies on a comparison of individuals claiming incapacity benefits prior to Pathways being introduced with other individuals claiming after it was introduced. Both cohorts included pilot and comparison areas. Since Pathways was introduced in two phases, we draw a further distinction between the October 2003 areas and the April 2004 areas; for both sets of areas, the evaluation used cohorts before and after the introduction of Pathways in both the pilot areas in question and their associated comparison areas. These comparison areas were carefully selected to resemble the pilot areas⁸. Further information about the conduct of the surveys is available in the accompanying technical report (Hales *et al.*, 2007 – forthcoming).

⁸ The comparison areas were selected on the basis that they were similar to the pilot areas in terms of economic and social characteristics in the 2001 Census and that Jobcentre Plus had already been introduced.

2.2 The survey data

The sample for the survey was mostly drawn from the Business Information Service (BIS) database. This is a management information reporting system that can be used to identify those people getting in touch with Jobcentre Plus Contact Centres in order to claim incapacity benefits. However, part of the sample (those from the October 2003 pre-Pathways comparison areas, detailed in Section 2.2.2) was drawn from the Jobcentre Plus Pathfinder database. This subset of the sample was therefore composed of individuals who had started an actual claim for incapacity benefits, rather than those who were only at the stage of enquiring about incapacity benefits. As some of those making an enquiry about incapacity benefits (and therefore recorded on BIS) would not go on to make an actual claim (see Chapter 3), there is a distinction between the individuals sampled from BIS, and those sampled from the Jobcentre Plus Pathfinder database. It is important to bear in mind this discrepancy in the sampling frames when interpreting results. For simplicity of presentation, where reference is made to those making an enquiry about incapacity benefits, this should be taken to include those drawn from the alternative Pathfinder database, unless stated otherwise.⁹

2.2.1 Variables captured in the survey

The survey data were collected from a maximum of three telephone interviews with a sample of individuals who enquired about claiming incapacity benefits in the seven pilot areas where Pathways was initially implemented, or in their associated comparison areas. The first telephone interview collected detailed background information on current employment activity. It also explored respondents' health condition and the nature of their disability. This made it possible to detail the baseline characteristics of those who made an enquiry about claiming incapacity benefits. Later interviews collected information on the respondent's benefit, employment and health status. This information was used to generate the outcome variables needed for the impact analysis. The analysis focused on the following outcomes:

- whether in paid work (including part-time work and self-employment, and those temporarily away on sick leave, training or holiday) either in the week of the final interview, or in the week prior to the final interview;

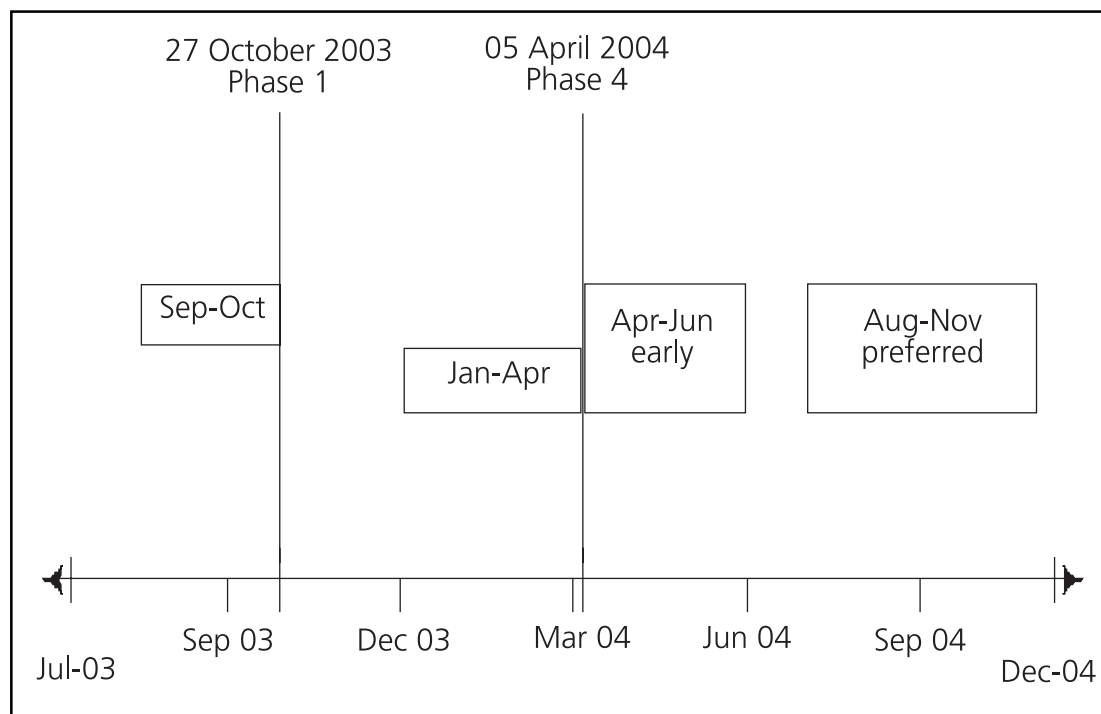
⁹ It should be noted that the original proposal for the project had ruled out the possibility of collecting data in the October 2003 areas since there was felt to be insufficient time to achieve this. In the event, it was possible to carry out interviews in these areas by very quickly identifying a sample source, agreeing a design for the questionnaire and beginning fieldwork. However, it took longer to identify a suitable group of comparison areas. By the time these had been agreed, the chance to sample from BIS had passed so another sample source was required. There were also practical reasons that led to the Department for Work and Pensions (DWP) preferring to provide a sample from a different source.

- whether in paid work during the week of the final interview, or the week before, of at least 16 hours a week;
- whether in paid work during the week of the final interview, or the week before, of at least 30 hours a week;
- monthly take-home pay at time of final interview. The respondent was asked to state their pay in their main job after all deductions such as tax, national insurance and pension contributions had been taken, but including overtime, bonuses, commission or tips last time they were paid;
- whether in work in each month between the first and final interviews, based on respondents' reports on the month and year in which each spell of employment started and ended;
- whether receiving incapacity benefits at the time of the final interview;
- whether reporting a health condition at the time of the final interview (or a recurring health condition which was not affecting them at present) which limited the ability to carry out everyday activities;
- whether reporting a health condition at the time of the final interview (or a recurring health condition which was not affecting them at present) which limited the ability to carry out everyday activities 'a great deal'.

2.2.2 Timing issues and identification of the samples

Figure 2.1 depicts the timing of incapacity benefits enquiry for the sample of survey respondents. As noted above, the analysis required information on a cohort of individuals starting their incapacity benefits claim before the introduction of Pathways and a second cohort starting their claim after the introduction of Pathways. In all cases, individuals were interviewed about a year and a half after their enquiry. The two vertical lines in the figure show the date on which Pathways was introduced for the October 2003 and April 2004 areas. The leftmost block in the figure shows that, in the October 2003 areas, the sample of those making an enquiry about incapacity benefits before Pathways was introduced was drawn from those getting in touch with a contact centre between 1 September and 26 October 2003. In the April 2004 areas the corresponding dates were 1 January and 4 April 2004. The sample of those making an enquiry about incapacity benefits after the introduction of Pathways was drawn from those getting in touch with a contact centre between 1 August and 30 November 2004. This was the same for both the October 2003 and April 2004 areas. The block labelled 'Apr-Jun early' corresponds to the early cohort used for the analysis in Adam *et al.* (2006). It does not feature in the analysis presented in this report.

Figure 2.1 Timing of the incapacity benefits enquiries from which survey samples were drawn



Details on the timing of interviews relative to these sampling dates are given in Box 2.1. Mostly, the first interview took place shortly after the enquiry about claiming incapacity benefits. The only exception to this was among the October 2003 pre-Pathways comparison areas where there was a delay of about seven months between the enquiry and the first interview.

Box 2.1 Timing of samples and surveys

October 2003 areas

Pre-Pathways sample

September 2003 – October 2003: initial enquiry regarding claiming incapacity benefits.

October 2003 – January 2004: first interview (background information) – pilot areas

March 2004 – June 2004: first interview (background information) – comparison areas (those who had made a successful claim for incapacity benefits only).

April 2005 – May 2005: final interview to collect outcome information.

Post-Pathways sample

August 2004 – November 2004: initial enquiry regarding claiming incapacity benefits.

October 2004 – March 2005: first interview to collect background information.

March 2006 – June 2006: final interview to collect outcome information.

April 2004 areas

Pre-Pathways sample

January 2004 – March 2004: initial enquiry regarding claiming incapacity benefits.

January 2004 – June 2004: first interview to collect background information.

August 2005 – October 2005: final interview to collect outcome information.

Post-Pathways sample

August 2004 – November 2004: initial enquiry regarding claiming incapacity benefits.

October 2004 – March 2005: first interview to collect background information.

March 2006 – June 2006: final interview to collect outcome information.

Table 2.1 shows the average length of time between the incapacity benefits enquiry and the final interview for the pilot and comparison groups in the October 2003 and April 2004 areas. In general, the final interview took place around 19 months after the initial enquiry. This means that, on average, it is possible to observe outcomes for more than a year and a half after the initial incapacity benefits enquiry. However, the final interview was somewhat later for the October 2003 pre-pilot comparison areas, taking place an average of over 22 months after the incapacity benefits enquiry.

Table 2.1 Length of time between first and final interviews

	Average number of months between first and final interviews	
	Those enquiring about incapacity benefits before Pathways was introduced	Those enquiring about incapacity benefits after Pathways was introduced
October 2003 areas		
Pilot	19.5 (534)	19.3 (740)
Comparison	22.4 (566)	19.3 (651)
April 2004 areas		
Pilot	19.0 (1,260)	19.3 (1,217)
Comparison	18.6 (157)	19.3 (659)

Notes: The sample size for each cell is shown in parentheses.

As noted above, full details on the surveys are available in the technical report (Hales *et al.*, 2007). Table 2.2 summarises the response to the survey. From this, it is clear that interviews were not achieved with a substantial proportion of the issued sample. The main factor contributing to this was the high number of errors in the contact details provided in the sample frame. In view of this, the sizeable sample reduction need not be problematic for later analysis since it is not associated with specific characteristics of individual sample members. Where contact was made, levels of refusal were low; in the region of eight to nine per cent (Hales *et al.*, 2007). This provides some reassurance that the reduction in sample size need not have compromised the representativeness of the achieved sample. However, the BIS database from which the sample was mainly drawn, contains too few details on individuals to allow a meaningful investigation of non-response bias to be carried out. As a general point, it should be noted that small sample sizes in themselves do not bias estimates but they make it more difficult to detect significant effects.

Table 2.2 Numbers sampled and interviewed

	Before Pathways	After Pathways
Issued sample	10,487	10,883
of which, responded to wave 1 interview	5,884	6,273
of which, replied to final outcome interview	2,760	3,899
of which, live in 'right' area	2,517	3,267
Breakdown of achieved sample by type of area		
Pilot areas		
October areas	534	740
April areas	1,260	1,217
Comparison areas		
October areas	566	651
April areas	157	659

2.3 The administrative data

2.3.1 Overview of National Benefits Database

The administrative data were extracted from the National Benefits Database (NBD), which is constructed from live benefits data. Since June 1999 the live benefits data have been scanned every six weeks to provide a snapshot of those claiming incapacity benefits at each date. Therefore, the administrative data used in the analysis provided information on all claims for incapacity benefits, as well as other benefits, such as Jobseeker's Allowance (JSA), from 1999 onwards.

Where an individual was observed making a claim at one scan, but did not appear in the database at the next scan, they were assumed to no longer be claiming benefits. Since the actual date that the benefit spell ended was not collected, closed spells were randomly assigned an end date. The imputed end date could fall anywhere within this six-week period and as a result, the actual end date may have occurred up to six weeks before or after the imputed date. Also, it was possible that some of those making a claim which lasted less than six weeks were not observed at all if their claim fell entirely within the six-week period between scans.

2.3.2 Variables available in National Benefits Database

The administrative data provided information on a range of personal characteristics for each individual, as well as details of their benefit history. This personal information included claimants' date of birth, their sex, the nature of their disability and identifiers for the local authority, based on their postcode. This geographic information was used to identify those living in the pilot and comparison areas. It also contained information on the number of children the claimant had at the start and end of each claim. However, following the introduction of Children's Tax Credit in April 2003, the number of children variable, as recorded on benefits data, is unreliable. Detailed information on the individual's health condition or disability was also available.

The benefit data covered the type of benefit claimed, the start and approximate end date of the benefit spell, the maximum length of time that the claim could have lasted (based on an assumption that it ended the day before the first extract where the claim no longer appeared), the date that the Income Support (IS) disability premium was first paid (if relevant), whether the individual received Incapacity Benefit (IB) credits only¹⁰, or the IS top-up to IB. From these data, variables were derived to indicate whether an individual was claiming incapacity benefits or JSA at any given point in time from 1999 onwards.

¹⁰ Individuals who have paid insufficient National Insurance contributions may receive IB credits only. Such claimants do not receive a payment but have their National Insurance account credited for the duration of their claim.

3 Description of the pilot area population

This chapter describes the regional distribution, personal characteristics and employment and benefit history of those who made an enquiry about incapacity benefits in the pilot areas between 1 August and 30 November 2004 – that is, after the introduction of Pathways – using information gathered in the telephone interviews. As described in Chapter 2, this information was collected for a period of around a year and a half following the initial enquiry. Only those individuals responding to the final interview are considered since this is the sample for which the impacts of Pathways are estimated. Administrative data are used to describe the population of those commencing a claim for incapacity benefits in the pilot areas over this same period. The characteristics of those in the survey and administrative datasets would be expected to differ, due to the fact that survey participants were selected from those who made an enquiry about claiming incapacity benefits, whereas the administrative population was composed of those who had made an actual claim for incapacity benefits. Nonetheless, there is a possibility that differences between the survey and administrative populations were partly due to survey response bias; that is, those responding to the survey being different in some way from the broader population.

3.1 Regional distribution

Table 3.1 shows the distribution of the pilot population by district. Amongst respondents to the survey, almost two-fifths came from the three districts where the pilots started in October 2003. The remaining 62 per cent came from the four areas where the pilots began in April 2004. Whilst fewer than 2,000 survey respondents lived in the pilot areas, more than 23,000 individuals from the pilot areas were identified in the administrative data as starting a claim between 1 August and 30 November 2004. The proportions living in Bridgend, Rhondda, Cynon and Taff, Renfrewshire, Inverclyde, Argyll and Bute, Gateshead and South Tyneside, and Lancashire East were fairly similar across the two data sources. However, the

administrative data recorded a larger proportion in Derbyshire (18 per cent compared to 14 per cent) and smaller proportions in Essex (24 per cent compared to 27 per cent) and Somerset (eight per cent compared to 12 per cent).

Table 3.1 Distribution of pilot population by district

District	Survey data %	Administrative data %
October 2003 pilot areas		
Bridgend and Rhondda Cynon Taff	14	12
Derbyshire	14	18
Renfrew, Inverclyde, Argyll and Bute	10	12
April 2004 pilot areas		
Essex	27	24
Gateshead and South Tyneside	11	11
Lancashire East	12	14
Somerset	12	8
Sample size	1,957	23,394

Source: Survey data and administrative data.

3.2 Personal characteristics

Table 3.2 summarises the personal characteristics of the pilot population using both the survey and administrative data. Due to the more limited range of personal characteristics available in the administrative data, some characteristics are observable only in the survey data. Women constituted 47 per cent of the survey sample but only 41 per cent of those in the administrative data. Survey respondents were also slightly older on average than those in the administrative data (43 compared to 40 years). Corresponding to this, the proportion of individuals under the age of 30 was much smaller among survey respondents than among the claimant population captured in the administrative data (16 per cent and 28 per cent respectively) while the proportion aged 50 or over was higher (38 per cent in the survey data, 29 per cent in the administrative data).

Respondents to the survey were predominantly white (97 per cent) and just over half (52 per cent) were married or had a partner. More than three-quarters (76 per cent) had no dependent children, and although similar proportions had one or two dependent children (ten per cent each), only five per cent had three or more dependent children. Two-fifths had no academic qualifications, whilst more than one third (35 per cent) had only GCSEs or equivalent. Fourteen per cent held a degree-level qualification.

At the time of the first interview, only 78 per cent of the pilot population reported a health problem. On average, this interview took place about three months after the initial incapacity benefits enquiry. Just over a quarter of those with a health problem at this stage reported that their main health problem was related to mental health. The administrative data, on the other hand, show that nearly two-fifths (39 per cent) of incapacity benefits claimants were categorised as having a 'mental or behavioural disorder'.

It is possible that this discrepancy arises from differences between the survey and administrative data in the information on mental health. There are two possible reasons for this: First, there are differences in the definitions of mental health. In the administrative data, the health information derives from the GP's medical certificate that is submitted to Jobcentre Plus as part of the incapacity benefits claim. The health condition or disability is then coded according to an Incapacity Reference Guide. The broad grouping of 'mental and behavioural disorders' is made up of a number of specified conditions. In the survey data, on the other hand, respondents are asked to name their main health condition and then to state whether they suffer from a range of specified health problems as part of this condition. One of the listed health problems is 'mental illness'. Consequently, respondents reporting that they suffer from mental illness will be using a subjective interpretation that will not necessarily conform to that used in the administrative data. There are also more systematic reasons for expecting a difference in definitions across the two data sources. Most strikingly, 'learning difficulties' is one element in the list of health problems respondents are asked about. This means that in the survey data, those with learning difficulties/disabilities are identified separately from those with mental health problems. In the administrative data, figures are only available for the broader grouping of 'mental and behavioural disorders'.

The second possible reason for a discrepancy between the survey and administrative data in their indicators of mental health arises from how the information is collected. It is conceivable that the information offered to survey interviewers may differ from the information individuals provided to their GPs for the purpose of claiming incapacity benefits.

Table 3.2 Personal characteristics of the pilot area population

Personal characteristics	Survey data %	Administrative data %
Female	47	41
Age, average age	43	40
Age <30	16	28
Age 30-39	19	21
Age 40-49	27	22
Age 50+	38	29
Non-white	3	
Partnered	52	
Number of dependent children		
0	76	
1	10	
2	10	
3 or more	5	
Highest qualification		
Degree or equivalent	14	
A-level or equivalent	6	
GCSE or equivalent	35	
Other qualifications	6	
No qualifications	40	
Health problem	78	
of which, mental health problem	26	39
Sample size	1,957	23,394

Notes: For some characteristics, the base used in the survey data is slightly smaller due to missing values. The incidence of mental health in the administrative data is calculated for a sample size of 22,491.

Source: Survey data and administrative data.

It is informative to examine the extent to which the difference between the survey data and the administrative data in recorded mental health is explained by differences in definition rather than differences in the composition of the two samples.¹¹ To do this, the two types of data were matched, where possible, so that the indicators of mental health in the two data sources could be compared. For those individuals who could be matched, 25 per cent were identified as having a mental health problem according to the survey and 29 per cent according to the administrative

¹¹ Comparison of differences between the survey data and the administrative data with regard to other variables such as age are not required; since these variables are unambiguously defined, differences simply reflect the different composition of the two samples.

data. Hence, although a small difference remains between the two data sources, the levels are much more comparable. This suggests that the survey data and administrative data are capturing broadly the same information and that the difference in levels of recorded mental health evident between the population of survey respondents making an enquiry about incapacity benefits and the population of claimants may be due mainly to differences in the composition of these two populations and selective response to the survey.

The health conditions which are included under the heading 'Mental and behavioural disorders' in the administrative data area shown in Table 3.3. Depressive episodes account for more than half of all mental illness.

Table 3.3 Type of mental health problem among the pilot population recorded as having a 'mental or behavioural disorder'

Type of mental health problem	%
Alcoholism	4.3
Depressive episode	53.5
Dissociative disorders	0.0
Drug abuse	6.8
Eating disorder	0.1
Manic episode	0.1
Mental and behavioural disorders associated with the puerperium, not elsewhere classified	0.8
Mental disorder not otherwise specified	1.5
Other anxiety disorders	13.6
Other neurotic disorders	5.6
Persistent delusional disorder	0.2
Persistent mood disorder	0.0
Pervasive development disorders	0.1
Phobic anxiety disorders	0.4
Reaction to severe stress	9.0
Recurrent depressive disorder	0.1
Schizophrenia	1.3
Specific development disorders of scholastic skills	1.1
Specific personality disorders	0.2
Unspecified dementia	0.1
Unspecified mental retardation	0.1
Unspecified mood disorder	0.5
Unspecified non-organic psychosis	0.7
Sample size	8,741

Note: All conditions listed occur in the data but those accounting for less than 0.05% are rounded to 0.0%.

Source: Administrative data.

Table 3.4 shows that 97 per cent of the pilot population made a claim for incapacity benefits some time in the six months before the first interview. The vast majority (87 per cent) made the claim in the 12 weeks before interview. This is in line with the fact that the first interview generally took place shortly after the respondent had made the enquiry about claiming incapacity benefits. The remaining 13 per cent of respondents had made their claim for incapacity benefits 13-26 weeks earlier. However, as already mentioned, not all of those making an initial enquiry about incapacity benefits end up making an actual claim. Estimates provided by the Department for Work and Pensions (DWP) suggest that about 20 per cent or so of claims are not pursued beyond the initial contact. Table 3.4 shows that only 63 per cent of those responding to the final interview in the pilot areas received incapacity benefits at the time of their first interview. This appears to imply a rate of claim non-pursual higher than the estimate provided by DWP but also reflects the fact that the first interview takes place about three months after the initial incapacity benefits enquiry on average, so a proportion of claims will have ended by this point. It is also possible that in some cases where a claim had been made, for some reason benefit was not yet in payment.

Table 3.4 Benefit status of the pilot population at first interview

	%
Whether claimed incapacity benefits before first interview	
Yes, claimed in the last 12 weeks	84
Yes, claimed in the last 13-26 weeks	13
No, not made a claim	3
Sample size	1,957
Receiving incapacity benefits at time of first interview	63
Sample size	1,957

Source: Survey data.

3.3 A description of the outcomes

3.3.1 Survey data

The employment status of the pilot population at the time of the final interview is described in Table 3.5. Just over a third (35 per cent) of the pilot population was in paid employment at the time of the final interview. Of these, 87 per cent worked for at least 16 hours a week while three-fifths worked at least 30 hours each week.

Table 3.5 Employment status of the pilot population at final interview

In paid work this, or last, week	%
No	65
Yes	35
of which, in paid work for 16 hours per week or more	87
of which, in paid work for 30 hours per week or more	60
Sample size	1,957

Notes: The sample size for the number of hours worked relates to those who were in paid work and stated their weekly hours (649 cases).

Source: Survey data.

In addition to asking questions about whether individuals were employed at the time of the final interview, an employment history covering the period between the first (background) and final (outcome) interview was collected. This can be used to show employment status on a month-by-month basis from approximately three to four months after their incapacity benefits enquiry up to about a year and a half later. Figure 3.1 shows that the rate of employment for the pilot population increased steadily over the period, from about 16 per cent four months after the incapacity benefits enquiry to 35 per cent a year and a half after the incapacity benefits enquiry.¹²

¹² First (background) interviews were intended to occur as soon as possible after the initial incapacity benefits enquiry. In practice, they generally took place about three to four months later. Consequently, there are too few observations to estimate the percentage in employment in the first three months.

Figure 3.1 Employment of the pilot population by month since incapacity benefits enquiry

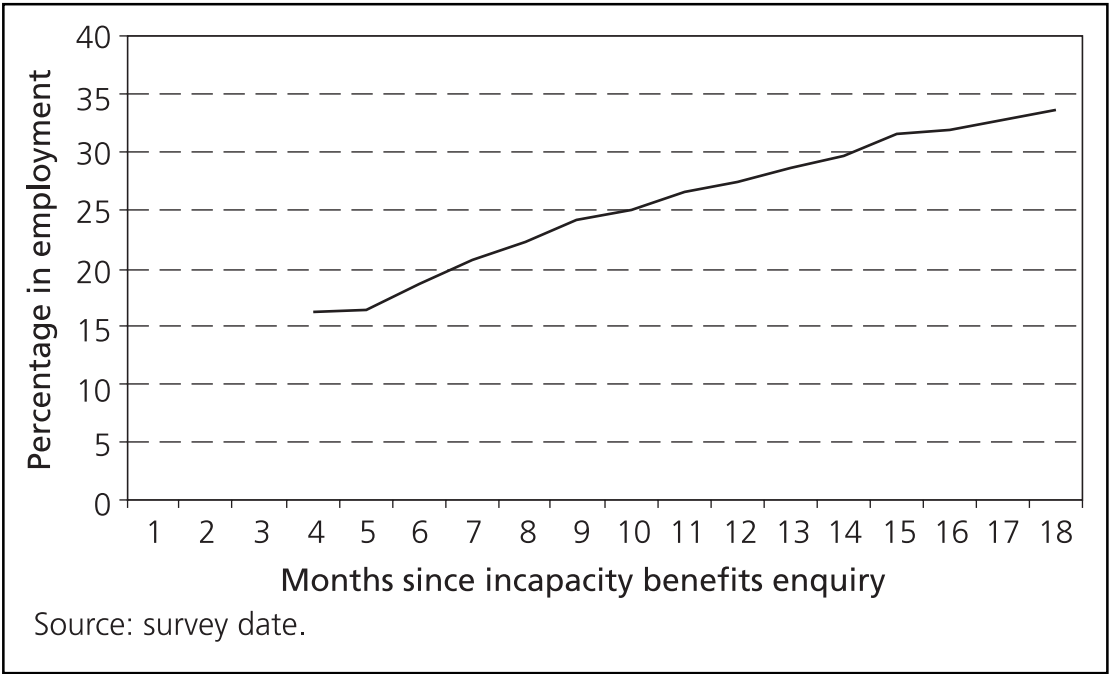


Table 3.6 shows the net average monthly earnings of the sub-sample of the pilot population who were in paid work at the time of the final interview and who provided information on their hours of work. Some individuals reported particularly high or low monthly earnings and the recorded earnings were adjusted to account for possible anomalies.¹³ This resulted in average net earnings of £777 a month. However, the standard deviation remained fairly large, indicating that there was a wide variation in earnings between individuals.

Table 3.6 Average net monthly earnings of those in work at final interview

	£
Average net monthly earnings	777.24 (361.10)
Sample size	452

Notes: The standard deviation is shown in parentheses.

Source: Survey data.

With regard to benefit status, Table 3.7 shows that just over half (51 per cent) of those in the pilot population were receiving incapacity benefits at the time of the final interview. Almost a third (32 per cent) were working and no longer claiming

¹³ Specifically, individuals reporting earnings in excess of £5,000 per month were excluded from the calculation of this average. Those with extremely low wages were also excluded.

incapacity benefits, whilst three per cent were working, but still on these benefits (under the Permitted Work rules, limited paid employment is permissible while still receiving incapacity benefits). Almost a fifth (18 per cent) of the pilot population were not claiming incapacity benefits by the time of the final interview, but were not working. Finally, almost half (47 per cent) of those responding to the final interview were still claiming incapacity benefits and not working. With regard to Jobseeker's Allowance (JSA), only four per cent were claiming at the time of the outcome interview.

Table 3.7 Benefit status of the pilot population at final interview

Benefit status at final interview	%
Receiving incapacity benefits	51
In work, not receiving incapacity benefits	32
In work, receiving incapacity benefits	3
Not in work, not receiving incapacity benefits	18
Not in work, receiving incapacity benefits	47
Sample size	1,906
Receiving JSA	4
Sample size	1,955

Source: Survey data.

Table 3.8 shows the health status of individuals at the time of final interview. More than four-fifths (82 per cent) of the pilot population reported a health condition or disability which affected their day-to-day activities. Respondents were also asked the extent to which their health condition or disability limits their ability to carry out their day-to-day activities. Thirty-nine per cent of respondents reported that their ability was limited 'a great deal'.

Table 3.8 Health status of the pilot population at final interview

	%
Has a health condition or disability that limits ability to carry out day-to-day activities	82
Has a health condition or disability that limits ability to carry out day-to-day activities 'a great deal'	39
Sample size	1,908

Source: survey data.

3.3.2 Administrative data

The administrative data provide information on the proportion of those in the pilot areas claiming incapacity benefits in each of the 18 months following the start of their claim. Figure 3.2 shows that the proportion claiming incapacity benefits fell

relatively quickly over the first few months following the start of their claim, so that less than three-fifths (59 per cent) were still claiming incapacity benefits after nine months. After this point, the decline in the proportion claiming incapacity benefits slowed, so that after 18 months half of the pilot population were still claiming incapacity benefits. This is the same as the finding using survey data (Table 3.7).

Figure 3.2 Incapacity benefits status of the pilot population by month since start of claim

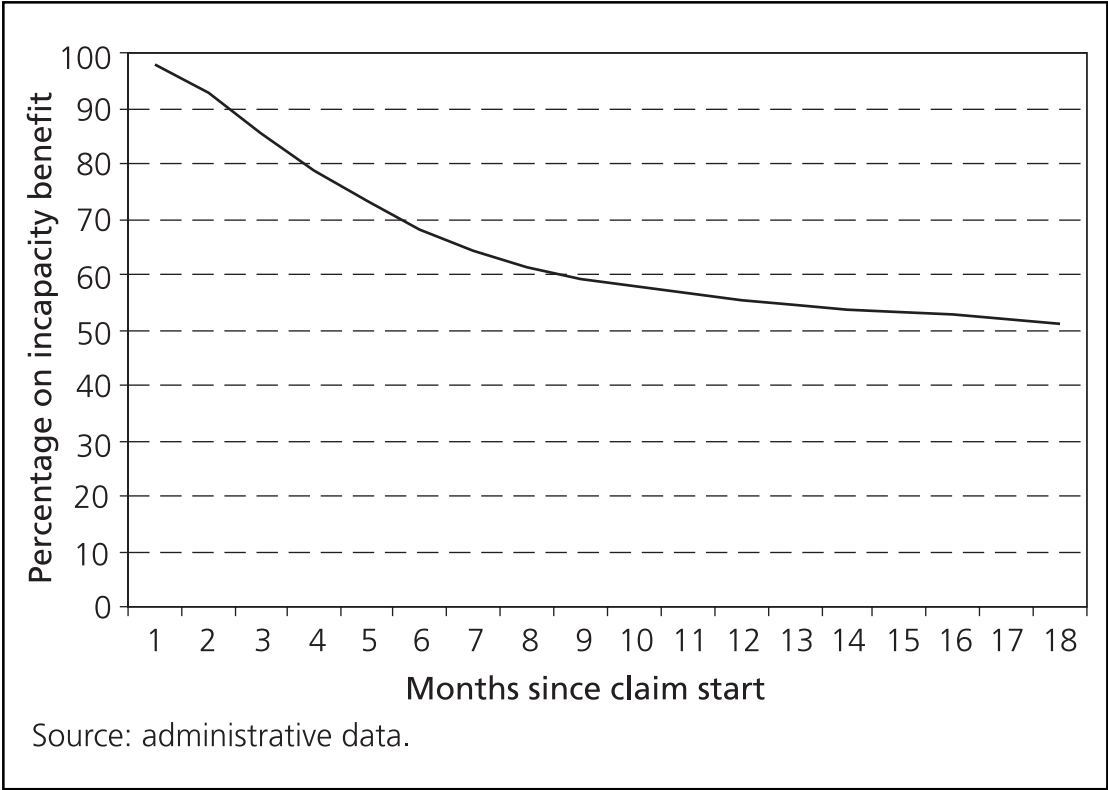
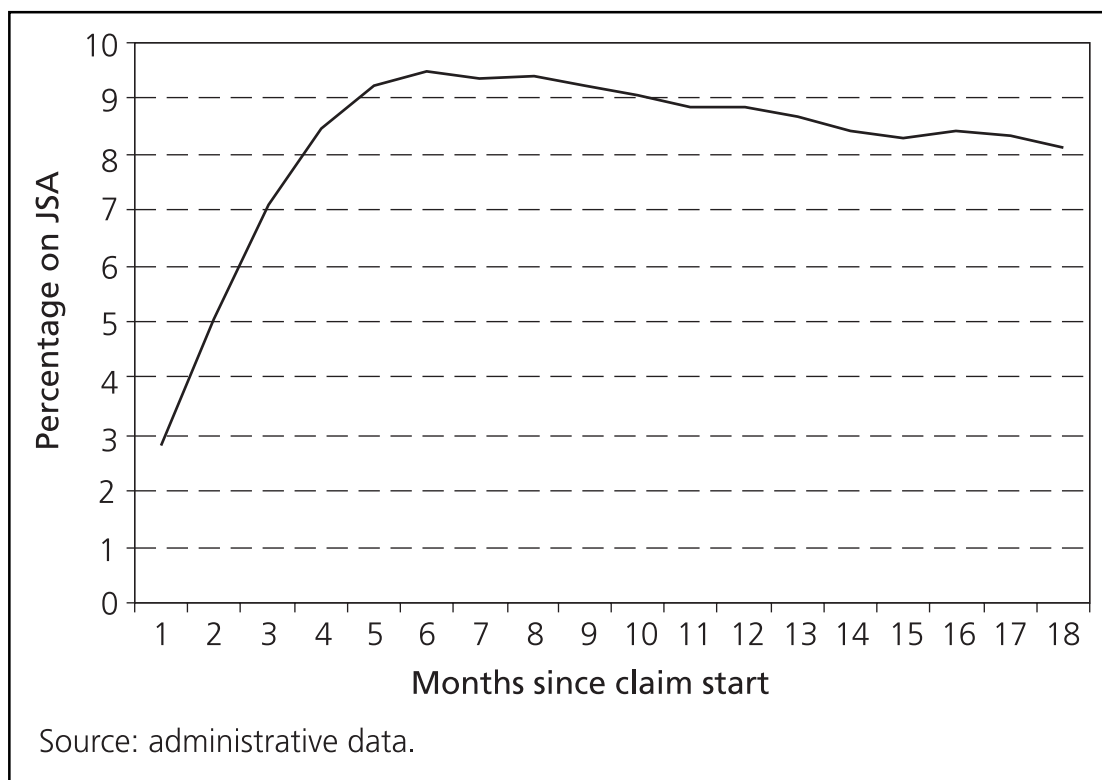


Figure 3.3 presents analogous results for JSA. The proportion claiming JSA rose quickly over the first five months following the start of the claim for incapacity benefits so that, by month five, nine per cent of the pilot population was claiming JSA. This proportion then declined very gradually, so that just under eight per cent of the pilot population was claiming JSA 18 months after the start of the claim for incapacity benefits. This is slightly higher than the corresponding estimate based on the survey data (Table 3.7).

Figure 3.3 JSA status of the pilot population by month since start of claim



4 Methodology

4.1 The evaluation problem

The aim of the evaluation is to estimate the overall impact of Pathways. To do this requires a measure of the counterfactual; that is, what would have happened if Pathways had not been introduced. The essence of the evaluation problem is that the counterfactual is not observable and has to be estimated. One approach is to use the observed outcomes of those in selected comparison areas as an estimate of the counterfactual for those in the pilot areas. However, this may not be a credible strategy if there are underlying differences between the two groups such that one would expect their outcomes to differ regardless of Pathways. An alternative approach would be to use the observed outcomes of those in the pilot areas before Pathways was introduced as an estimate of the counterfactual for those in the pilot areas after Pathways was introduced. In this case, the problem is that changes over time may have affected outcomes regardless of Pathways and using the pre-Pathways outcomes does not capture this. The approach followed in this evaluation is to use a difference-in-differences (DiD) approach to provide an estimate of the counterfactual and thereby an estimate of the impact of Pathways. In this chapter, the DiD approach and its underlying assumptions are considered.

4.2 Difference-in-differences

4.2.1 An overview of the approach

The DiD approach in this application involves a comparison of the change in an outcome of interest among individuals in the pilot areas before and after the introduction of Pathways with the change among individuals in comparison areas. The difference between the two before-after differences provides an estimate of the effect of Pathways. In practice, this double differencing is performed in a regression framework so that the effect of observed characteristics on outcomes can be controlled for. However, this does not alter the underlying intuition behind the approach.

Table 4.1 uses observed levels of employment at the time of the final survey interview before and after the introduction of Pathways for the April 2004 areas and their associated comparison areas to illustrate how DiD works. The ‘before’ column indicates that, among those in the pilot areas making an enquiry about incapacity benefits before Pathways was introduced, 33 per cent were in work at the time of the final interview. The ‘after’ column indicates that this rose to 37 per cent among those in the pilot areas making an enquiry about incapacity benefits after Pathways was introduced. The resulting before-after comparison reports an increase of four percentage points. Repeating this for the comparison areas yields a before-after estimate of -2 percentage points. This can be thought of as an estimate of the change that those in the pilot areas would have experienced had Pathways not been introduced. This assumes that whatever external factors caused the -2 percentage point change in the comparison areas would, in the absence of Pathways, have led to a similar change among those in the pilot areas. To arrive at an estimate of the effect of Pathways, this counterfactual change must be deducted from the observed change for those in the pilot areas. Doing so gives a DiD estimate of six percentage points.

Table 4.1 An illustration of the DiD estimator using observed employment at time of final survey interview, April 2004 areas

	(B) Percentage employed at final interview before Pathways	(A) Percentage employed at final interview after Pathways	Difference percentage points (A-B)
Pilot areas	33	37	4ppt
Comparison areas	39	37	-2ppt
DiD estimate			6ppt

Source: Survey data.

As noted above, the impact estimates controlled for the effect of observable characteristics. This was achieved by estimating the results using a linear probability model.¹⁴ The control variables used in the DiD analysis of the survey data were as follows:

- sex;
- age;
- whether there were dependent children in the household;
- ethnicity;

¹⁴ That is, the results were estimated using ordinary least squares.

- age at which they left formal schooling;
- whether they had a partner and if so, the partner's employment status;
- the type of health problem experienced;
- the length of time the health problem had lasted.

As already noted, the survey data were collected for those making an enquiry about claiming incapacity benefits rather than those who had made an actual claim. The DiD estimates based on survey data, therefore, show how Pathways affected subsequent outcomes for the population of those making an enquiry. As reported in Chapter 2, about a fifth of those making an enquiry do not go on to make an actual claim. The estimated effects can, therefore, be broadly regarded as the effects of eligibility rather than the effects of participation, since that proportion of those in the survey sample who do not go on to start an incapacity benefits claim will have no direct experience of Pathways itself.

A more limited range of control variables was included in the DiD analysis of the administrative data, namely:

- sex;
- age;
- whether the claimant was recorded as having a mental or behavioural disorder;
- whether claiming incapacity benefits each of the eight quarters before the start of the incapacity benefits claim;
- whether claiming Jobseeker's Allowance (JSA) in each of the eight quarters before the start of the incapacity benefits claim.

Since the administrative data include only those who started an incapacity benefits claim, the estimated effects can be more directly interpreted as the effects of Pathways participation since everyone should, to some extent, participate in the Pathways process.

In addition to controlling for the effect of observable characteristics, DiD controls for a fixed impact of unobserved characteristics on outcomes. As an example of such a characteristic, it may be that variations between the pilot and comparison areas in the industrial structure of their local economies means that there are differences in the number of employment opportunities available in the pilot areas relative to the comparison areas. If the impact on employment of these differences remains fixed over the period considered, their effects disappear in the before-after comparisons. Similarly, unobserved characteristics that change over time are controlled for so long as they affect employment in the pilot and comparison groups equally. An example of such an unobserved characteristic may be a general macroeconomic improvement. The effects of these characteristics disappear when differencing the before-after comparisons. The remaining unobserved characteristics are those whose impact changes over time in a different way for the pilot and comparison areas.

4.2.2 Assumptions underlying DiD

To provide unbiased estimates of the effect of Pathways, the unobserved characteristics not controlled for by DiD – those that change over time and in a different way for the pilot and comparison areas – must not affect outcomes. There are two assumptions required for this to be credible: The first is that the composition of the pilot and comparison area samples before and after the introduction of Pathways should remain unchanged with regard to those unobserved characteristics that may affect outcomes. For example, it is conceivable that individuals in the pilot areas might have brought forward the timing of their incapacity benefits claim in order to avoid being mandated to go onto Pathways. If these individuals were characterised by low levels of motivation, the resulting DiD estimate would not control for this unobserved change and could be biased. In this evaluation, it seems unlikely that many individuals in the post-Pathways samples would have taken such avoidance tactics since they would have had to bring forward their claim by at least four months and may not have had sufficient flexibility to achieve this. However, it is possible, at least in principle, that the pre-Pathways sample in the pilot areas includes some who claimed sooner than they otherwise would have done in order to avoid the requirements of Pathways. Another possibility is that the existence of Pathways changes the attractiveness of claiming incapacity benefits in the pilot areas such that some individuals now claim an incapacity benefit who would not previously have claimed and who differ in an unobserved way from those who would have claimed regardless of Pathways. Perhaps, the more motivated individuals welcome the opportunity to benefit from the services available. Alternatively, Pathways may deter the less work-orientated from claiming. Either way, this may result in a change in unobserved characteristics that could bias the resulting estimates. The results in this evaluation, maintain the assumption that there is no such change in the composition of the sample resulting from the introduction of Pathways.

The second assumption underpinning DiD in this application is that those unobserved characteristics that change over time and affect outcomes do so equally for the pilot and comparison areas. The likely validity of this assumption can be explored by conducting pre-programme tests (Heckman and Hotz, 1989). Such tests are carried out by using DiD to estimate the effect of a hypothetical – that is, non-existent – intervention taking place between two periods of time, both of which pre-date the introduction of Pathways. If these effects are found to be significant, it suggests that, in the past, it has not been possible using the DiD approach to achieve reliable estimates of the counterfactual. If this has been the case in the past, there has to be a concern that it remains true in later periods, in which case any resulting DiD estimates may be biased. For example, should the pre-programme tests show a significant positive ‘effect’ of the hypothetical intervention in the past, one might expect estimates to show a similar positive effect following the introduction of Pathways, even if Pathways did not, in fact, have any true effect. In this example, the positive estimated effect can be regarded as bias, and the true effect is over-estimated.

In the remainder of this section, the results of carrying out the pre-programme tests are presented. This was done using administrative data since these provided information on the population of those commencing an incapacity benefits claim long before the introduction of Pathways, whereas survey data were only available for a single cohort of individuals prior to the introduction of Pathways. Two hypothetical interventions were examined; first one, and then two years prior to the introduction of Pathways. Figure 4.1 shows the structure of the administrative data used for these tests. In order to provide an insight into the likely reliability of the later analysis based on survey data, cohorts of new claimants were identified from the administrative data in such a way as to mirror the timing of the cohorts used for the survey analysis.¹⁵

Each of the pre-programme tests is based on two cohorts of individuals commencing an incapacity benefits claim; for the first cohort, the claim starts are all before the time of a hypothetical intervention, for the second cohort, the claim starts are all after the time of a hypothetical intervention. For the individuals in these cohorts, the tests estimate the effect of the hypothetical intervention on the probability of claiming incapacity benefits in each of the 18 months following the start of their incapacity benefits claim. Each of the effects is estimated separately using DiD.

For the tests of a hypothetical intervention one year prior to the introduction of Pathways, the start dates were (shown in blue in Figure 4.1):

- October 2003 areas:
 - first cohort: 1 September 2002 – 26 October 2002
 - second cohort: 1 August 2003 – 26 October 2003¹⁶
- April 2004 areas:
 - first cohort: 1 January 2003 – 4 April 2003
 - second cohort: 1 August 2003 – 30 November 2003

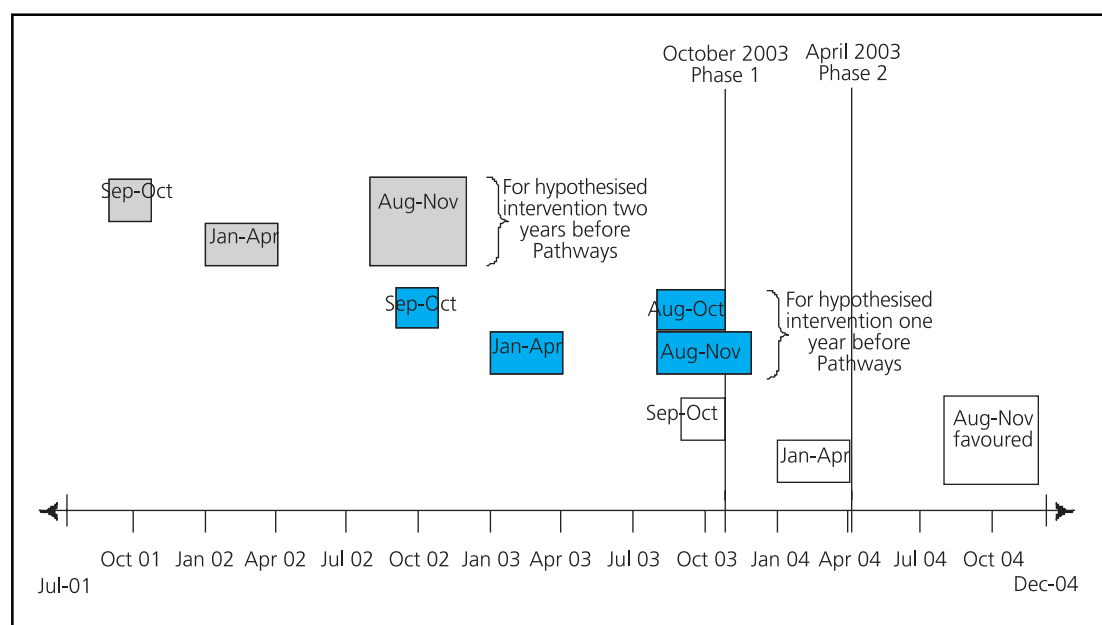
¹⁵ As noted already, the population captured in the survey data differs from that captured in the administrative data. Using the results of pre-programme tests estimated using administrative data to judge the viability of estimating impacts using survey data implies an assumption that the pre-programme test results carry over to the survey data. While relying on such an assumption is not ideal, given the nature of the available data, this test provides the best guide as to the reliability of the survey-based results.

¹⁶ It was necessary to exclude cases relating to the period from 27 October 2003 to 30 November 2003 for the pre-programme tests one year before Pathways was introduced in the October 2003 areas since this period fell after the introduction of Pathways and so those starting a claim after 27 October 2003 within the pilot areas would have received the treatment.

For the tests of a hypothetical intervention two years prior to the introduction of Pathways, the start dates were (shown in grey in Figure 4.1):

- October 2003 areas:
 - first cohort: 1 September 2001 – 26 October 2001
 - second cohort: 1 August 2002 – 30 November 2002
- April 2004 areas:
 - first cohort: 1 January 2002 – 4 April 2002
 - second cohort: 1 August 2002 – 30 November 2002

Figure 4.1 Definition of the cohorts of new incapacity benefits claims used for the pre-programme tests



4.2.3 Testing the counterfactual in the October 2003 areas

Figure 4.2 shows the extent to which, one year before the introduction of Pathways, it was possible to use the comparison areas to provide a reliable estimate of the counterfactual in the October 2003 pilot areas. The outcomes considered are receipt of incapacity benefits in each of the 18 months following the start of the claim. The results in the figure control for those characteristics detailed in Section 4.2.1.

The estimated effects are shown by the solid line. These effects represent the difference between actual and counterfactual estimates of incapacity benefits receipt for each of the 18 months following the start of the initial claim. The surrounding dashed lines show the 95 per cent confidence intervals and indicate the level of statistical significance; where they are both on the same side of the x-axis, it is possible to conclude with a high degree of certainty that the estimate of the counterfactual was significantly different from observed outcomes in the period

considered. Figure 4.2 shows that consistently significant effects of about four percentage points were found from month ten onwards for an imaginary intervention introduced **one** year before the actual introduction of Pathways. This indicates that, for these longer-term outcomes, the assumption that the DiD approach can reliably estimate the counterfactual in the year prior to the introduction of Pathways may not be tenable.

Figure 4.2 Tests of the counterfactual estimates of incapacity benefits receipt in October 2003 areas in the period one year before the introduction of Pathways

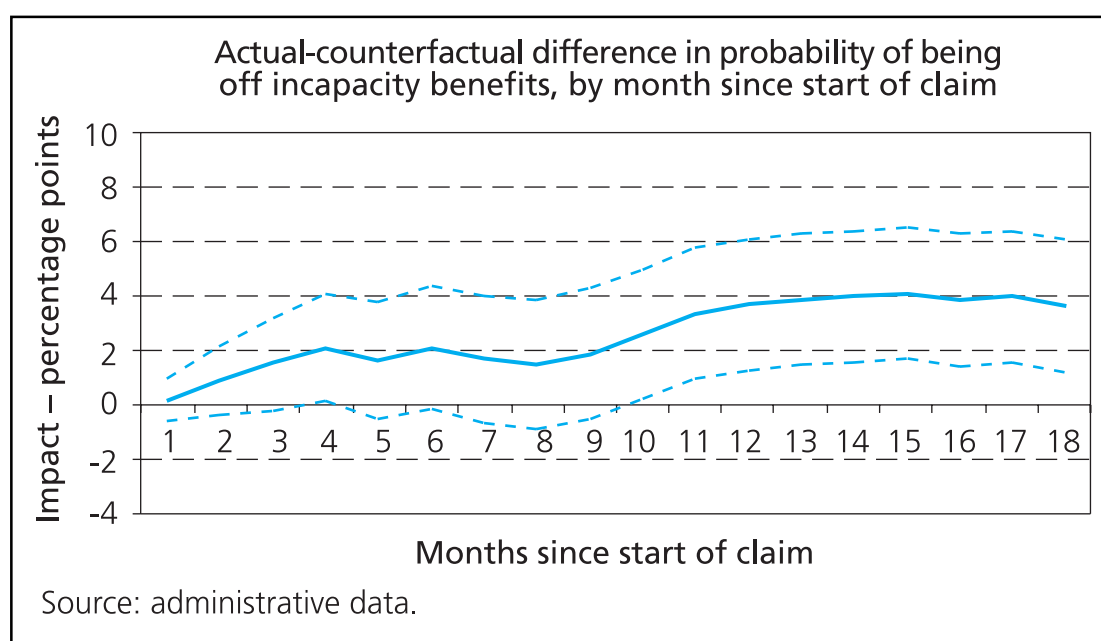
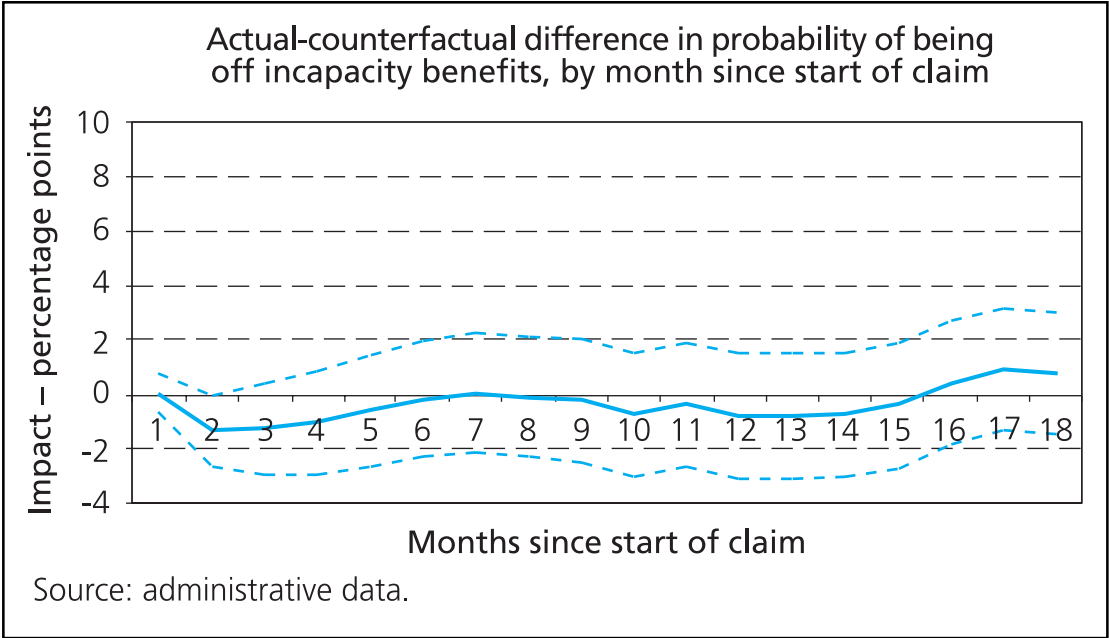


Figure 4.3 shows that for the October 2003 pilot areas in the period two years prior to the introduction of Pathways, there was no such problem; the estimated counterfactuals did not differ significantly from observed outcomes.

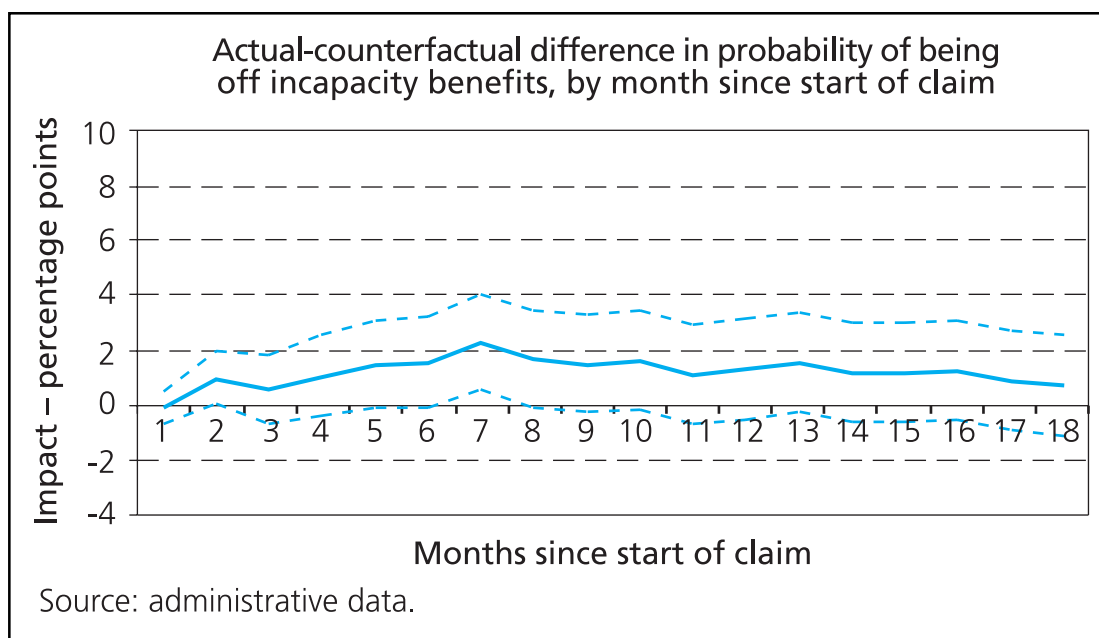
Figure 4.3 Tests of counterfactual estimates of incapacity benefits receipt in October 2003 areas in the period two years before the introduction of Pathways



4.2.4 Testing the counterfactual in the April 2004 areas

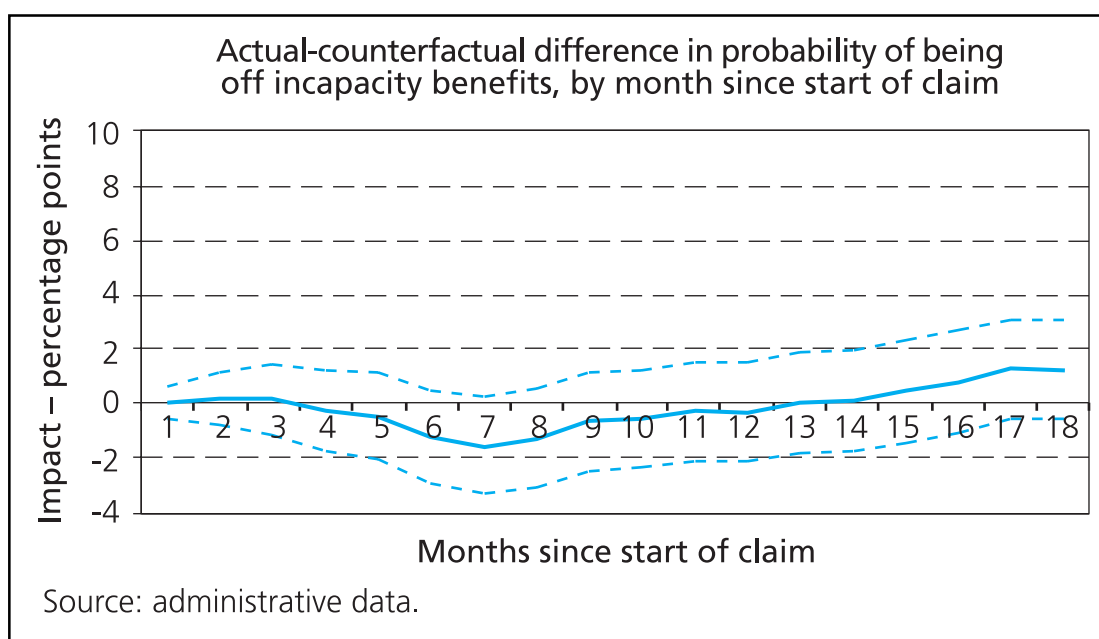
Figure 4.4 presents the results for the April 2004 areas in the year before the introduction of Pathways. The effects are mostly statistically insignificant, which provides some reassurance that the counterfactual can be reliably estimated for those in the April 2004 areas in the year prior to the introduction of Pathways. Furthermore, the estimated effects are smaller than for the October 2003 areas, peaking at about two percentage points in month seven (the only effect to be statistically significant at the conventional level).

Figure 4.4 Tests of counterfactual estimates of incapacity benefits receipt in April 2004 areas in the period one year before the introduction of Pathways



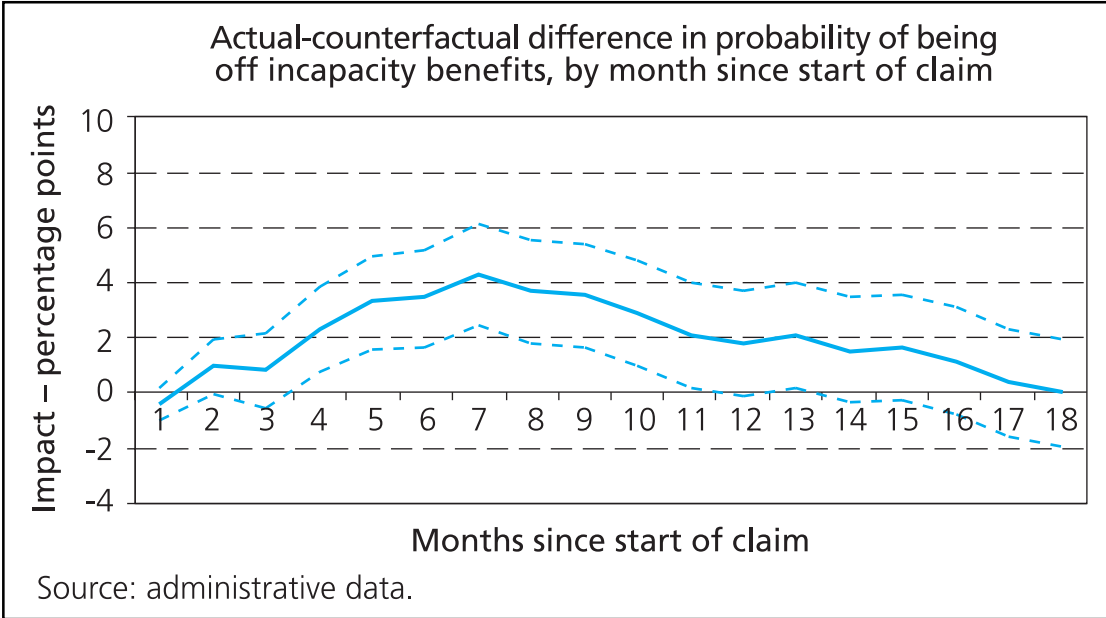
The results for the period two years prior to the introduction of Pathways are shown in Figure 4.5. This showed no statistically significant effects.

Figure 4.5 Tests of counterfactual estimates of incapacity benefits receipt in April 2004 areas in the period two years before the introduction of Pathways



While the results for the April 2004 areas are more encouraging than those for the October 2003 areas, it should be noted that the results for the period one year before the introduction of Pathways – that is, the results that revealed a problem for the October 2003 areas – differ across the two phases of Pathways rollout in that the October 2003 test results apply to a cohort of individuals commencing a claim just before Pathways was introduced while the April 2003 results apply to a cohort of individuals some months before Pathways was introduced locally. One possible explanation for this difference may be that individuals starting a claim shortly before the introduction of Pathways are affected by Pathways in some way. For the purpose of comparability, it is useful to carry out an additional pre-programme test to see if those individuals in the April 2004 areas who started a claim just before the introduction of Pathways appear to have been affected by Pathways. The DiD test in this case is based on a cohort of individuals starting a claim between 1 January and 4 April 2004 and a cohort starting a claim in a similar period one year earlier. The results in Figure 4.6 show that in this case statistically significant effects are found between months 4 and 11. Beyond this point, effects are statistically insignificant.

Figure 4.6 Tests of counterfactual estimates of incapacity benefits receipt in April 2004 areas in the period one year before the introduction of Pathways for those starting a claim immediately prior to the introduction of Pathways



4.2.5 Implications for the analysis

The results of the pre-programme tests provide an insight into the best approach to adopt when estimating results based on the administrative data and also into the reliability of the estimated impacts of Pathways using the survey data. With regard to the former, the pre-programme tests found that, for the October 2003 areas, it was possible to estimate a reliable counterfactual two years prior to the introduction of

Pathways but not possible one year prior to the introduction of Pathways. This is consistent with Figure 1.1 which shows higher exit rates from incapacity benefits in the October 2003 areas in the period leading up to the introduction of Pathways. In light of this, it is preferable to avoid including those commencing their claim in the year prior to Pathways in the sample used to estimate the effect of Pathways. So, for the administrative analysis we decided to use the cohort who made a claim for incapacity benefits between September and October 2002 (instead of those who made a claim between September and October 2003, as was used for the pre-pilot survey). A similar approach is adopted for the April 2004 areas since the pre-programme tests showed difficulties estimating a reliable counterfactual using those commencing an incapacity benefits claim shortly before the local introduction of Pathways. The before-Pathways cohort used in the administrative data analysis for the April 2004 areas is consequently made up of those commencing a claim in the period January-April 2003; again, a year before the corresponding cohort for the survey data analysis.

We turn now to the question of what the results mean for the reliability of the survey-based impact estimates. As noted in Chapter 2, the survey captured outcomes measured approximately a year and a half after the time of making an enquiry about incapacity benefits. The pre-programme tests described above failed for longer-term outcomes in the October 2003 areas. For the April 2004 areas, the pre-programme tests did not suggest there would be any problems using survey data to look at the effect of Pathways on longer-term outcomes.

It is helpful to consider the possible reasons why these tests fail for the October 2003 areas. One possibility is that it is due to Pathways having an effect on those individuals in the pilot areas who had an existing claim at the time Pathways was introduced. Such existing claimants, are free to participate in Pathways on a voluntary basis so it could be that the reduction in numbers on incapacity benefits among those flowing on before Pathways was introduced, is actually caused by the policy as some of those existing claimants are choosing to participate. A second possibility is that Pathways may have prompted an anticipation effect. That is, if the Pathways treatment (or some form of it) could have been delivered before its formal introduction, it is conceivable that the tests could be capturing the effects of this. Both these possibilities appear to conform to the finding that the tests fail when including a sample of those commencing their incapacity benefits claim shortly before the introduction of Pathways. That is, one might expect (although this need not necessarily be the case) that existing claimants would be more likely to volunteer while their claim was still quite new and similarly one might expect that anticipation effects would be likely to peak just before the introduction of Pathways. Under either of these scenarios, Pathways has an effect on those who flowed onto benefits prior to the introduction of Pathways. This means that using this group as a control would understate the effectiveness of the policy.

A third possibility is that the tests are capturing differences between the pilot and comparison groups in the timing of Jobcentre Plus rollout. It is a little difficult to infer from such an interpretation, that the estimated impacts of Pathways will be biased

since the status of Jobcentre Plus roll-out during the period covered by the tests will differ from that which pertains during the period used for estimating the impacts of Pathways, so it does not immediately follow that the same biasing influence will be present. That is, additional Jobcentre Plus rollout took place in the time between the periods used for the pre-programme tests and the periods used to estimate the impact of Pathways. Furthermore, if Jobcentre Plus rollout were the reason for failure of the pre-programme tests, one might imagine that the tests carried out in the period two years before the introduction of Pathways might have also failed since the first 'Pathfinder' Jobcentre Plus offices were introduced during this period. As seen already, these tests did not show any significant differences.

As a broader point, it is worth highlighting that Jobcentre Plus rollout could, in principle, influence the achieved impact estimates. An examination of those individuals in the pre-Pathways cohort living in areas for which the date of Jobcentre Plus roll-out was known provided two relevant insights: First, for some respondents, Jobcentre Plus was not in place at the time of their incapacity benefits enquiry. This is most apparent for the October comparison areas – here, 12 per cent of enquiries were made before Jobcentre Plus was rolled out locally. Second, there was variation in how long Jobcentre Plus had been in place at the time of enquiry. In the October 2003 pilot areas, Jobcentre Plus had been in place for an average of 13.6 months compared to just 7.5 months in the comparison areas. The April 2004 pilot and comparison areas were better matched at 16.8 and 20.6 months respectively; moreover, it seems plausible that any such differences become less important at longer durations.

A reasonable conclusion to draw from these results is that one should be very cautious about relying too closely on the impact estimates in the October 2003 areas based on survey data. The results based on administrative data are unaffected since it is possible to alter the timing of the pre-Pathways samples to avoid the biases discussed above. Accordingly, the focus in the remainder of this report will be on the results for the April 2004 areas, although the results for the October 2003 areas – both the survey data results and the administrative data results – will be presented for reference (in Appendix A).

However, as will be seen when presenting the final impact estimates in the next chapter, the test results for the April 2004 areas based on those starting their incapacity benefits claim shortly before the introduction of Pathways (Figure 4.6) appear quite similar to the final impacts presented in Chapter 5 (Figure 5.2). This raises the possibility that those starting their incapacity benefits claim shortly before the introduction of Pathways in the April 2004 areas may have been affected by Pathways. Since the final impacts estimates based on survey data use a cohort of individuals enquiring about a claim shortly before the introduction of Pathways, these final impact estimates may, therefore, under-state the true effect of Pathways.

Although this possibility cannot be explored further, a number of considerations are relevant: First, unlike the October 2003 areas, the test results for the April 2004 areas do not suggest any difficulties in estimating the counterfactual for outcomes about

a year and a half after the start of the claim. Since this is the period to which most of the survey-based outcomes relate, the test results do not imply a problem when considering results at the time of the outcome interview. Nevertheless, we cannot rule out the possibility that the estimated effects on interim outcomes observed in the survey data are downward biased. Since employment is the only outcome that is considered on a month-by-month basis using the survey data, this caveat applies only to the estimated effects on interim employment. Second – and relevant to the possibility of downward bias in interim employment effects – the pre-programme tests could only be carried out for benefit outcomes so we have not been able to examine how well other counterfactual outcomes could be estimated. Finally, as noted in Chapter 3, the population observed in the administrative data of those starting an incapacity benefits claim is different from the population of those who make an initial enquiry about incapacity (which forms the basis for the survey data).

5 Results

This chapter presents the estimated effects of Pathways on a range of outcomes using both survey and administrative data. To recap, both types of data have their particular strengths: survey data provide a richer source of information than administrative data on both background characteristics and outcomes but administrative data offer the largest possible number of observations and avoid the problems of non-response and recall error that can arise with survey data. As discussed in the previous chapter, there were some difficulties associated with the analysis for the October 2003 areas so in this chapter we focus on the April 2004 areas. The results for the October 2003 areas are given in Appendix A.

Before presenting the results themselves, it is worth clarifying the nature of the estimated effects and how these differ according to whether they are based on the survey or the administrative data. As already mentioned, the survey data capture those individuals making an enquiry about claiming incapacity benefits. Accordingly, estimates based on the survey data relate to this population as a whole and do not distinguish between those individuals who go on to make a successful claim and those who do not. In this regard, the results allow for the possibility that one effect of Pathways may be to change the probability (or likelihood or chances) of individuals proceeding to the stage of making a full claim. Estimates based on the administrative data, on the other hand, relate to the population of successful claimants and so may not be expected to correspond with estimates based on the survey data. No distinction is drawn between those expected to participate fully in the mandatory components of Pathways and those for whom participation is voluntary due to being Personal Capability Assessment (PCA)-exempt or screened-out at the first Work Focused Interview (WFI).

5.1 The effect of Pathways on employment

The estimated effect of Pathways on the probability of being employed at the time of the survey interview is given in Table 5.1. As reported in Chapter 2, these survey interviews took place on average about a year and a half after the initial enquiry about incapacity benefits. Consequently, outcomes measured at the time of interview can be regarded as relating to roughly a year and a half after incapacity

benefits enquiry and so are quite long-term in nature. It should be remembered that the results reported in the earlier Department for Work and Pensions (DWP) report (Adam *et al.*, 2006) relate to about 10½ months after incapacity benefits enquiry.

Before considering the results themselves, it is useful to briefly discuss their format: Table 5.1 has five columns. For each row, the first column shows the outcome being considered. The second column (under the heading ‘Impact estimate’) provides the difference-in-differences estimate of the effect of Pathways on the outcome in question. In all cases, these estimates control for personal characteristics as discussed in Chapter 4. The third column is headed ‘P-value’ and this indicates the level of statistical significance attached to the impact estimate. The smaller the P-value, the more confident we can be that the estimated effect is capturing a meaningful impact of Pathways rather than simply random variation across individuals. The P-value can be loosely interpreted as the probability (in percentage terms) of the observed effect arising purely by chance. The fourth column provides an estimate of how the outcome in question would look for those in the pilot areas had Pathways not been introduced. In other words, this is an estimate of the counterfactual and is calculated as the average outcome for those in the pilot areas less the estimated effect. This column is headed ‘Base’ since it is the base against which the effect must be assessed. The final column gives the number of observations on which the impact estimate is based.

With this in mind, the first row of results in Table 5.1 suggests that Pathways increased the probability of being in paid work at the time of the survey interview by 7.4 percentage points, from a base of 29.7 per cent. The P-value suggests that the impact is statistically significant since there is only a nine per cent probability of finding an effect of this size by chance.¹⁷ The second row of results in Table 5.1 shows that it was not possible to detect a statistically significant effect of Pathways on the probability of working 16 or more hours per week at the time of interview. This is also true for jobs of 30 or more hours per week (see row 3). Taken together, these results might appear to suggest that Pathways increased the probability of working roughly a year and a half after the time of incapacity benefits enquiry and that this was driven particularly by the effect on employment of relatively few hours a week. However, it is more likely that, while an effect on overall employment can be detected, it is not possible to find a statistically significant effect when considering **any** sub-category of employment defined according to the number of hours worked.

¹⁷ By convention, P-values of five per cent or less are regarded as indicating statistical significance. However, this is essentially arbitrary and ignores the continuous nature of P-values. The approach taken in this report is to use the conventional five per cent P-values for the results based on the administrative data but to use ten per cent P-values for the results based on the survey data in view of the smaller sample size available for these estimates. The charts based on survey data show confidence intervals corresponding to P-values of five per cent. This is sufficient to convey visually the general statistical significance of the results.

Table 5.1 Estimates of the effects of Pathways on employment outcomes at time of interview, April 2004 areas

	Impact estimate	P-value	Base	Sample size
In paid work, any hours	7.4*	9	29.7	3,291
In paid work, 16 hours or more	5.9	18	25.0	3,237
In paid work, 30 hours or more	3.3	40	18.0	3,237

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level. The results in rows 2 and 3 are based on fewer observations than the results in row 1 since not all respondents in work provided useable information on their hours of employment.

Source: Survey data.

It is possible to explore how the employment effect changes over time by making use of the employment history captured in the survey. This is shown in Figure 5.1. As in Figure 3.1, the estimates do not cover the first three months following incapacity benefits enquiry. This reflects the delay between the enquiry and the first survey interview; the survey captured employment history from the time of the first survey interview onwards and there were too few observations available for reliable analysis prior to month four. Between month five and month 18 the number of observations on which the estimates were based remained broadly stable.

Figure 5.1 has two panels: The upper panel presents the impact estimates – the estimated percentage point increase in employment due to Pathways – together with its confidence interval (shown by dotted lines) which denotes the statistical significance of the results. If the confidence interval is entirely above or below the x-axis, the effect is statistically significant at conventional levels; that is, the probability of the observed effect arising purely by chance is 1 in 20 or less (i.e. a P-value of five per cent or less). Where the confidence interval spans the x-axis, the effect is not statistically significant at conventional levels. However, in the case where the confidence interval almost lies wholly above or below the x-axis, this is indicative of an effect with a level of statistical significance only slightly lower than the conventional P-value of five per cent. The lower panel plots actual employment over time (shown by the solid line) together with an estimate of the counterfactual employment (labelled 'Base'). As before, this provides an estimate of what the month-on-month level of employment would have been for those in the April 2004 areas had Pathways not been introduced. This is shown by the dashed line.

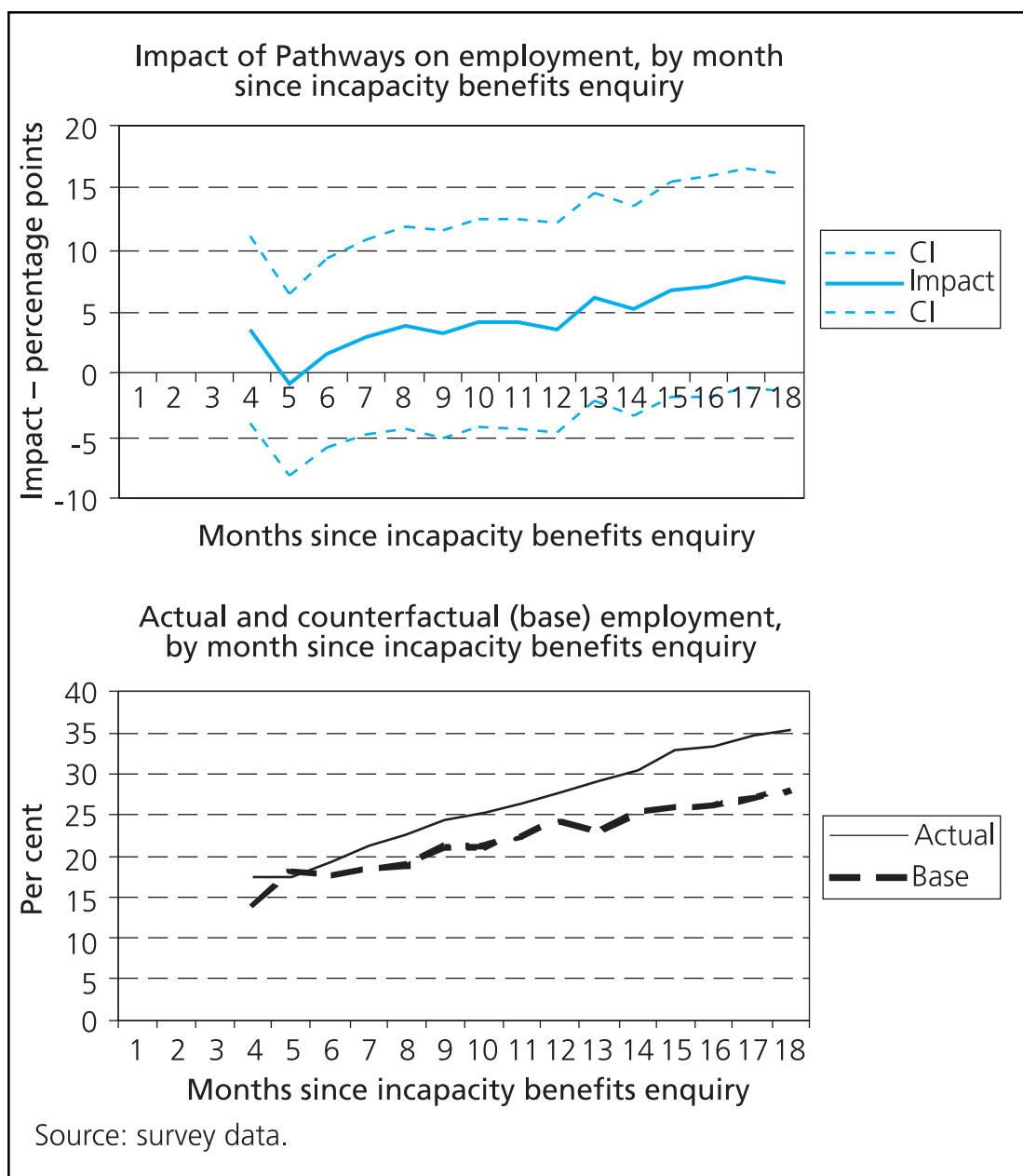
Substantively, the results in Figure 5.1 suggest that the effect of Pathways evolved gradually and did not approach statistical significance for the first year after the initial enquiry. However, the effect appears to have grown such that 18 months after the initial enquiry the positive effect of about seven percentage points reported above was detectable with a P-value of about ten per cent. Moreover, this effect appears to be relatively stable over the few months leading up to month 18. It should be borne in mind when considering the evolution of the effect on employment that the results in Chapter 4 suggest the estimated effects on employment in some of the

months sooner than a year and a half after the initial enquiry may be downward biased.

It is informative to also consider the base against which this is measured. The dashed line in Figure 5.1 suggests that, without Pathways, employment over time would have increased from 18 per cent in month five to 28 per cent in month 18. This allows for the possibility that individuals may be employed in one month but not in a later month. The effect of Pathways appears quite substantial against this context, raising the probability of employment in month 18 from roughly 28 to 35 per cent.

These results are informative in understanding the effect of Pathways over time. However, the employment histories collected in the survey do not provide information on hours worked so it is not possible to examine whether there might have been an effect at any point over the 18-month period on the probability of working 16 or more hours per week (or, indeed, 30 or more hours per week).

Figure 5.1 Estimates of the effect of Pathways on the probability of being employed by month, April 2004 areas



5.2 The effect of Pathways on earnings

With evidence of an effect of Pathways on the probability of being in paid work at the time of the final interview, one might expect to see an increase in average earnings at this time. To explore this, earnings were calculated as monthly take-home pay for those in work at the time of the last survey interview and zero for those out of work at this time.¹⁸ Table 5.2 shows the estimated effect of Pathways on net earnings thus defined in the April 2004 areas. The positive increase in earnings cannot be attributed any meaningful interpretation since the P-value shows the results to be statistically insignificant. It is perhaps surprising that the employment effect described above should not be accompanied by a significant increase in earnings. A partial explanation for this might be that the estimates are subject to a large degree of imprecision arising from the small number of observations for which take-home pay could be observed among those making an enquiry about incapacity benefits in the April 2004 comparison areas prior to Pathways being introduced. As shown in Chapter 2, the estimation sample includes only 157 such individuals. Since take-home pay can only be observed for those in work, the estimate of earnings for those pre-Pathways April 2004 comparison areas individuals is based on the responses of only 61 people. This compares to 241 people in the post-Pathways April 2004 comparison areas, 420 in the pre-Pathways April 2004 pilot areas and 452 in the post-Pathways April 2004 pilot areas. The small sample size makes it more difficult to detect an effect on earnings.

Table 5.2 Estimate of the effects of Pathways on net monthly earnings at time of interview, April 2004 areas

	Impact estimate	P-value	Base	Sample size
Monthly net earnings at time of interview (£)	33.28	40	252.61	3,291

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Survey data.

¹⁸ The wording of the question was as follows: ‘*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?*’ Those in work who did not provide useable information in response to this question were given the average level of earnings prevailing among those in work in the pilot/comparison area before/after the introduction of Pathways, as appropriate.

5.3 The effect of Pathways on incapacity benefits receipt

The estimated effect of Pathways on incapacity benefits receipt at the time of the survey interview is given in Table 5.3. This shows a reduction of 1.7 percentage points by this time but that this effect is not statistically significantly different from zero (P-value of 72 per cent).

Table 5.3 Estimates of the effects of Pathways on incapacity benefits receipt at time of interview, April 2004 areas

	Impact estimate	P-value	Base	Sample size
Receiving incapacity benefits	-1.7	72	51.1	3,212

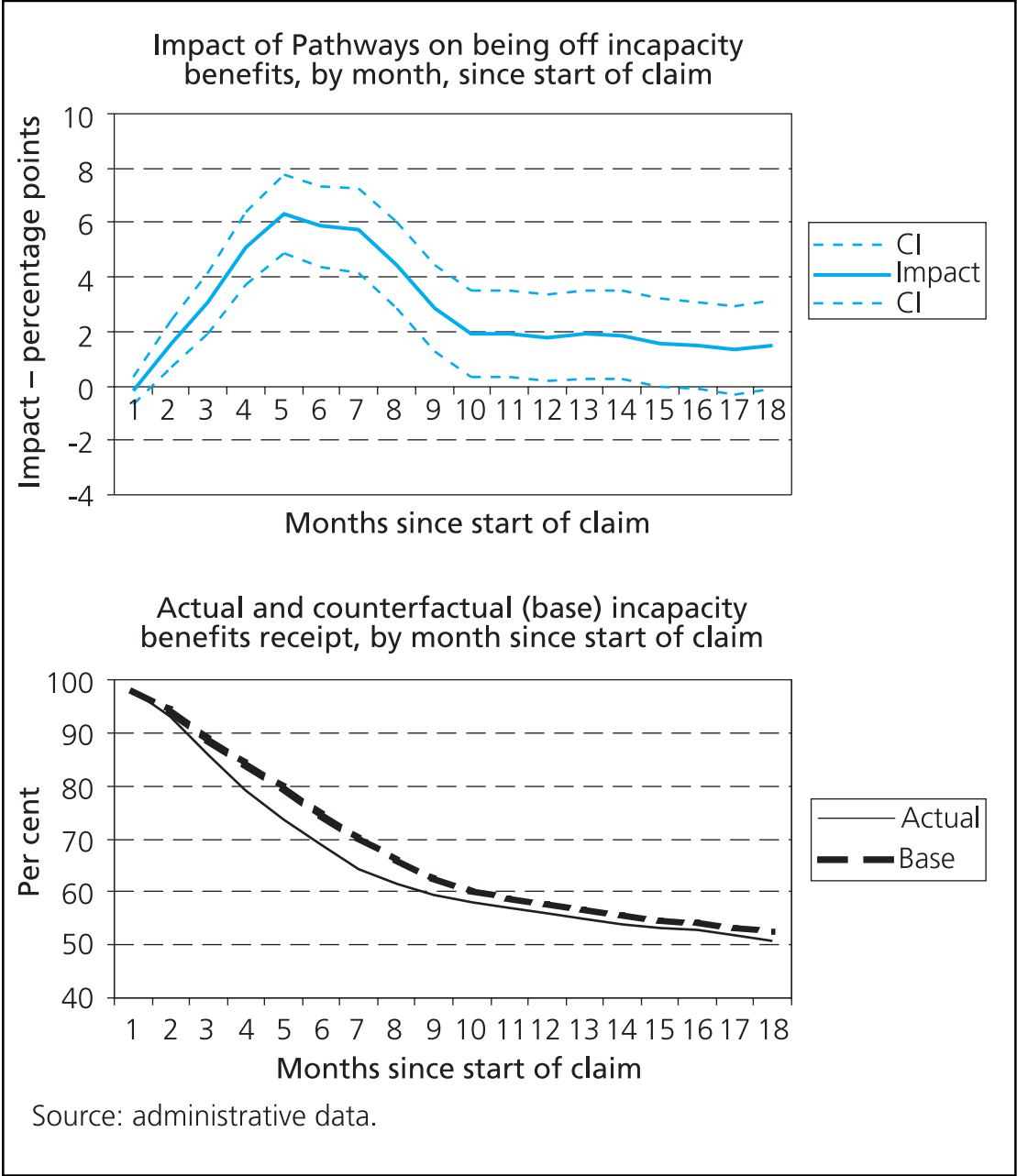
Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Survey data.

It is possible that a statistically significant effect was evident at an earlier point. This cannot be examined using the survey data since benefit history was not collected but administrative data can be used for this purpose. Figure 5.2 shows the impact of Pathways on the probability of claiming incapacity benefits in each of the 18 months following the start of the incapacity benefits claim, based on administrative data for the April 2004 areas. This is based on similar data to that used in Figure 1.1 but differs in two important regards: First, while the results shown in Figure 1.1 relate to first exit from benefit, the results in Figure 5.2 allow for the possibility that an individual will have ended an incapacity benefits claim and then started a new one some time later. Second, while Figure 1.1 presents raw off-flow rates, the results in Figure 5.2 control for differences in composition between pilot and non-pilot areas (through regression analysis). Of course, the results in Figure 5.2 are also different from the results in Figure 1.1 to the extent that they present impact estimates rather than rates of incapacity benefits exit.

The results suggest Pathways increased the chances of being a non-claimant of incapacity benefits but that this effect was greatest quite soon after the start of the incapacity benefits claim and declined in size, thereafter. After peaking at 6.3 percentage points five months after the start of the claim, the effect reduced to a fairly stable level of about 1½ to 2 percentage points after month ten. The size of this eventual effect and the estimate of what the level of incapacity benefits receipt would have been had Pathways not been introduced (52 per cent) matches very closely the estimate based on survey data (Table 5.3). This effect was statistically significant for the period between two and fourteen months following the start of the claim and narrowly failed to achieve statistical significance at conventional levels from month 15 onwards.

Figure 5.2 Impact of Pathways on being off incapacity benefits by month, April 2004 areas



While Figure 5.2 is useful in showing the effect of Pathways on incapacity benefits receipt in each month following the start of the claim, it is helpful to attempt to summarise this information. In Table 5.4, the 18-month period is broken down into three successive six-month periods. For each of these periods, the probability that the individual claimed incapacity benefits continuously is presented. If Pathways encourages exits from incapacity benefits, one would expect the prevalence of continuous claims to be reduced. This does appear to be the case in the first six months after the start of the claim; the prevalence of continuous claims was reduced by over six percentage points. The reduction in the second six months was smaller at

just over two per cent but still statistically significant. Over the remainder of the period considered (months 13-18), the effect was smaller still and statistically insignificant.

Table 5.4 Effect of Pathways on receipt of incapacity benefits – summary measures for April 2004 areas

	Impact estimate	P-value	Base	Sample size
Effect on probability of a continuous incapacity benefits claim in:				
Months 1-6	-6.2**	0	73.2	54,837
Months 7-12	-2.1**	1	54.5	54,837
Months 13-18	-1.1	17	49.2	54,837

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Administrative data.

5.4 The effect of Pathways on employment and incapacity benefits combined

The results discussed above present something of a puzzle to the extent that Pathways appears to have a long-term positive effect on employment but was not found, using survey data, to significantly reduce receipt of incapacity benefits a year and a half after the initial enquiry (as shown in the previous section, the small reduction seen in the survey data was of a similar size to the reduction estimated using administrative data which *was* marginally significant). This bears some similarity to the finding in Adam *et al.* (2006) that, while early impacts of Pathways on both employment and benefit could be found, these operated through different groups of individuals. In order to explore this further, Table 5.5 considers four possible combinations of employment status and incapacity benefits receipt at the time of the survey interview. Specifically, the four combinations are:

- in work, not receiving incapacity benefits;
- in work, receiving incapacity benefits;
- not in work, not receiving incapacity benefits;
- not in work, receiving incapacity benefits.

Table 5.5 Estimates of the effects of Pathways on combined employment/incapacity benefits status at time of interview, April 2004 areas

	Impact estimate	P-value	Base	Sample size
In work, not receiving incapacity benefits	8.7*	5	24.8	3,210
In work, receiving incapacity benefits	-1.6	18	4.6	3,210
Not in work, not receiving incapacity benefits	-6.9*	8	24.0	3,210
Not in work, receiving incapacity benefits	-0.2	96	46.6	3,210

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Survey data.

Before considering the results in Table 5.5 it should be noted that, since we are considering all possible combinations of employment and incapacity benefits status, the four estimated effects must sum to zero. In other words, should Pathways increase the share of the population accounted for by one combination, this must be offset by a similar-sized reduction in the share accounted for by the other three combinations. With this in mind, we can see from the results in the first row that Pathways significantly increased the probability of working and not receiving incapacity benefits at the time of the outcome interview by 8.7 percentage points from a base of nearly 25 per cent. The main decrease offsetting this was the probability of being out of work and not receiving incapacity benefits (third row). This fell by a statistically significant 6.9 percentage points, from a base of 24 per cent. The sum of these two effects is equal to the overall effect on the probability of receiving incapacity benefits at the time of the outcome interview (Table 5.3). Individually, what they reveal is that, despite there being little evidence of an effect of Pathways on the probability of receiving incapacity benefits, Pathways does appear to increase the likelihood of employment among those not receiving incapacity benefits at the time of the outcome interview.

This offers a means of reconciling the apparent contradiction of having a significant effect on employment but not on incapacity benefits receipt. It is important to note that the combined employment and incapacity benefits receipt outcome is observed about a year and a half after the original incapacity benefits enquiry. It is not necessarily the case that those observed to be working and not claiming incapacity benefits will have moved directly from incapacity benefits to employment; it could be that there was an intermediate stage of not claiming incapacity benefits and not being employed. Similarly, those observed to be not working and not claiming incapacity benefits could have had an intermediate stage of working and not claiming incapacity benefits. There is, in fact, a number of potential scenarios under which the apparent shift from 'not employed, not on incapacity benefits' to 'employed, not on incapacity benefits' could have arisen. Below are three possibilities:

- Pathways could have increased the probability of moving from incapacity benefits to employment among those who would have left incapacity benefits anyway;
- Pathways could have increased the probability of job retention among those who would have left incapacity benefits and found work anyway;
- Pathways could have increased the probability of entering employment at a later date among those leaving incapacity benefits for a reason other than employment.

Whilst it is not possible to distinguish between these possibilities, it is helpful to consider, in more detail, those not working and not receiving incapacity benefits. Table 5.6 shows that 19 per cent were claiming Jobseeker's Allowance (JSA) at the time of the final interview. Respondents were asked whether they had participated in a range of activities in the four weeks prior to their outcome interview. Thirty per cent reported recently looking for work. However, the largest activity reported was looking after the home or family; 62 per cent of those not working and not receiving incapacity benefits had spent some time in the previous four weeks doing this. Other activities were less commonly reported: 12 per cent had spent some time caring for an adult with a health condition, ten per cent had participated in an education or training course and seven per cent had done some voluntary work. Nearly half lived with their partner and so may potentially have been supported financially. It is not possible to say what impact Pathways had on any of these activities, nor do we speculate on the mechanisms by which any such impacts could have come about.

Table 5.6 Characteristics of those not working and not receiving incapacity benefits at the time of outcome interview

	%
Claiming JSA	19 (201)
Looking for paid work (if not working)	30 (203)
Looking after home or family	62 (203)
Caring for an adult with a health condition	12 (203)
Education or training course	10 (203)
Voluntary work	7 (203)
Lives with partner	47 (203)

Sample sizes in parentheses. Source: Survey data.

5.5 The effect of Pathways on health

In this final section, the extent to which Pathways affects self-reported health is considered. Since part of the motivation for Pathways is that work can have beneficial health effects, it is of direct interest to examine the evidence for whether this has been the case. Furthermore, through the Condition Management Programme (CMP), Pathways may improve individuals' ability to cope with their health problem directly. However, it is not necessarily the case that the overall effect on health would be positive. Individuals may feel under increased pressure to move into work and

may, in cases, accept unsuitable employment. This could have potentially negative effects on self-reported health.

Two health outcomes are considered: The first is whether individuals report having a health condition or disability which affects their everyday activities. The second is whether individuals report having a health condition or disability which affects their everyday activities ‘a great deal’. It is important to be clear on what these outcomes actually capture. The first depends on three factors: respondents’ health, the nature of their everyday activities and how they report this to the survey interviewer. The second depends on these same factors but also depends on the actual level of limitation on everyday activities and, again, how this is reported to the survey interviewer.

A complication with dealing with these self-reported health outcomes is that individuals’ responses may be influenced by their employment status. While it is wholly possible that employment does have consequences for health, it is also possible that being employed changes how individuals report their health for reasons unconnected with any real change in underlying health. One possibility is that individuals not in work may report poor health as justification for their not being employed, possibly for reasons of self-esteem. If this were the case then an increase in employment might be expected to be accompanied by an improvement in self-reported health regardless of whether there was any change in actual health. Another possibility is that a move into work involves a change in an individual’s everyday activities and therefore, the ability to deal with these new activities may be more limited. In this case, an increase in employment may result in an increased tendency for individuals to report that their health condition or disability limits their ability to carry out their everyday activities but it is really a change in activities that is driving this rather than a change in underlying health, which is the outcome of interest.

With these caveats in mind, Table 5.7 presents effects for the two health outcomes mentioned above. In the first row, the effect of Pathways on the probability of individuals reporting that, at the time of their survey interview, they have a health condition or disability which affects their everyday activities is presented. From this, it appears that Pathways did not have a statistically significant effect on whether individuals reported such a health problem or disability. In the second row, the severity rather than the existence of the health problem or disability is considered. Survey respondents were asked whether their health condition or disability limited their ability to carry out their day-to-day activities ‘a great deal’, ‘to some extent’, ‘a little’ or ‘not at all’. The second row of results in Table 5.5 shows the effect of Pathways on the probability of respondents reporting that their health condition or disability limited their ability to carry out day-to-day activities ‘a great deal’. The estimated effect of Pathways is to significantly reduce this probability by nearly 11 percentage points. In the absence of Pathways, nearly half the sample would report a health condition or disability that limits their ability to carry out day-to-day activities ‘a great deal’. So it seems that Pathways does not reduce the incidence of

self-reported health conditions or disabilities but does reduce the probability of individuals reporting that their health condition or disability substantially limits their ability to go about their everyday lives.

Table 5.7 Estimates of the effects of Pathways on self-reported health at time of interview, April 2004 areas

	Impact estimate	P-value	Base	Sample size
Health problem affects day-to-day activity	-4.0	27	86.1	3,177
Health problem affects day-to-day activity 'a great deal'	-10.8**	2	49.8	3,124

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Survey data.

6 Subgroup analysis

In this chapter, we consider the effects of Pathways on specific subgroups within the overall population of the April 2004 areas. The subgroups considered are those defined on the basis of sex, age, the nature of the health problem and the presence of dependent children in the household. For all subgroups, only the key outcomes are presented: employment status, incapacity benefits receipt and self-reported health status. Results based on both survey data and administrative data are presented. The exception to this is the subgroup defined on the basis of dependent children in the household; here, only results based on survey data are given since the presence of children is not reliably recorded in the administrative data.

The estimates presented for a particular subgroup are based on only those individuals within that subgroup. This has two consequences that are relevant for the interpretation of the results: First, it means that the subgroup estimates are based on a smaller number of observations than when considering the April 2004 areas as a whole. Consequently, the effects of Pathways are almost always less precisely estimated than when considering the full population and it becomes more difficult to detect a statistically significant effect, should one exist. In view of this, the lack of a statistically significant effect should not necessarily be taken to mean that Pathways has had no effect for a particular subgroup; rather, it should be viewed as indicating that Pathways has not had a **sufficiently large** effect for it to be captured statistically.¹⁹ This problem of reduced sample size is especially relevant when considering results based on the survey data. The approach followed in this chapter is to focus mainly on the question of which groups of individuals appear to be affected more (or less) by Pathways, rather than interpreting the actual size of the effects too closely.

The second consequence of estimating within-subgroup effects is that comparisons of the two resulting estimates do not control for differences in composition between the subgroups. For example, a comparison of the estimated effect for men with the estimated effect for women takes no account of the possibility of differences between men and women in other characteristics that might influence effects. The

¹⁹ This does not preclude the possibility that Pathways may have had no effect for a particular subgroup, of course.

implication of this is that, while the results can show that Pathways had a greater effect on some subgroups than others, this difference is not directly attributable to the characteristic that identifies the subgroup. In terms of the example above, should the effect of Pathways be greater for women than for men, we cannot infer from this that being female in itself increases the likely effect of Pathways; rather, it is the case that the combined characteristics of women predispose them to being affected more by Pathways than men, with their set of characteristics, tend to be.

6.1 Effects of Pathways by sex

Table 6.1 shows the effects of Pathways separately for men and women. By the time of the final interview, marked differences between men and women were apparent. No statistically significant effect was found for men but, for women, Pathways had a larger and more significant positive effect on the probability of being in work. No significant effect on the probability of claiming incapacity benefits at the time of the final interview was found for men or women. Chapter 5 showed that Pathways reduced the proportion of individuals reporting a health condition or disability that limited their ability to carry out their day-to-day activities ‘a great deal’. The results in Table 6.1 show that this effect was statistically significant for men but not for women.

Table 6.1 Estimates of the effects of Pathways on outcomes measured at time of final interview, April 2004 areas – results by sex

	Impact estimate	P-value	Base	Sample size
Men				
In paid work, any hours	3.0	62	35.8	1,786
Receiving incapacity benefits	3.8	55	43.9	1,733
Health problem affects day-to-day activity	-3.5	45	84.9	1,715
Health problem affects day-to-day activity ‘a great deal’	-11.9**	4	49.0	1,690
Women				
In paid work, any hours	13.0**	5	22.2	1,505
Receiving incapacity benefits	-7.5	29	58.8	1,479
Health problem affects day-to-day activity	-5.1	36	88.1	1,462
Health problem affects day-to-day activity ‘a great deal’	-9.5	15	50.8	1,434

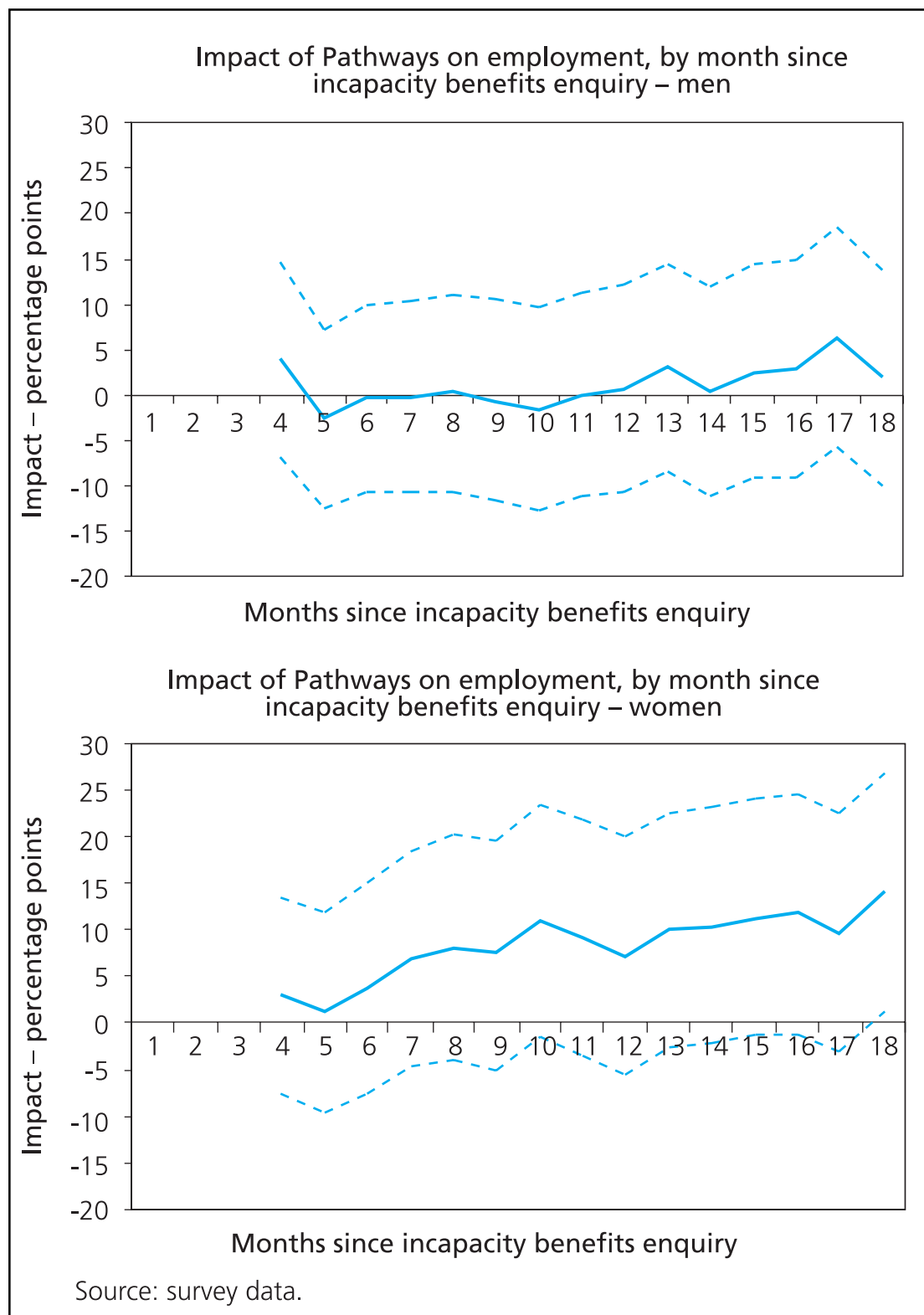
Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Survey data.

Looking at the estimated effects of Pathways on month-by-month employment confirms the broad picture presented above with respect to employment. Figure 6.1 shows a larger and more significant effect for women than for men and furthermore

suggests that this difference persisted for some time, albeit at marginal levels of significance.

Figure 6.1 Estimates of the effect of Pathways on the probability of being employed by month, April 2004 areas – results by sex



Turning to the administrative data, Figure 6.2 shows that Pathways significantly increased the likelihood that men would not be claiming incapacity benefits in the period two to 13 months after the start of their claim. However, from month 14 onwards, these effects became insignificant. For women, Figure 6.3 shows that the significant effect of Pathways on the probability of not claiming incapacity benefits lasted for a shorter period than for men (from months two to nine).

Figure 6.2 Estimates of the effect of Pathways on the probability of not claiming incapacity benefits by month, April 2004 areas – men

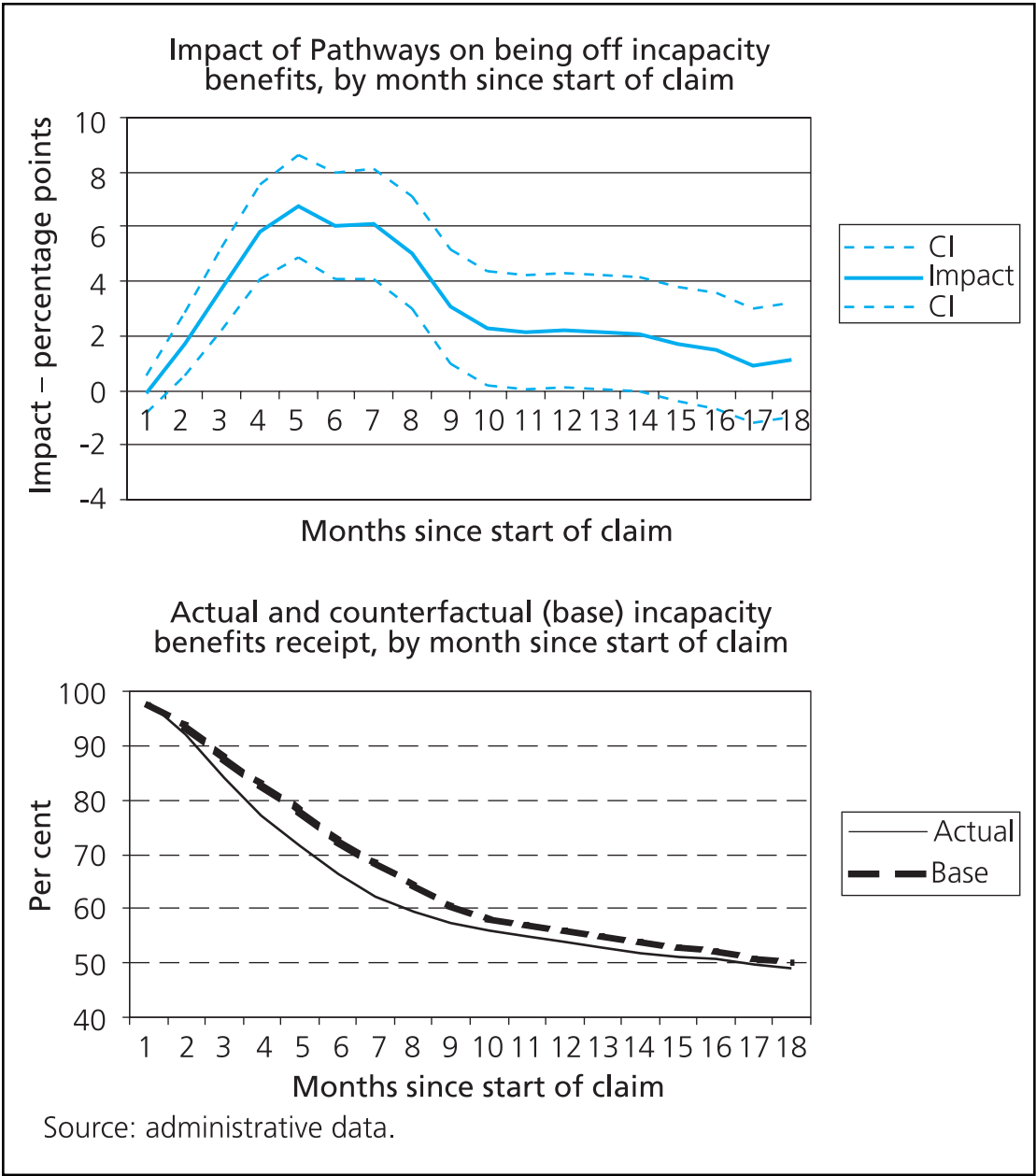
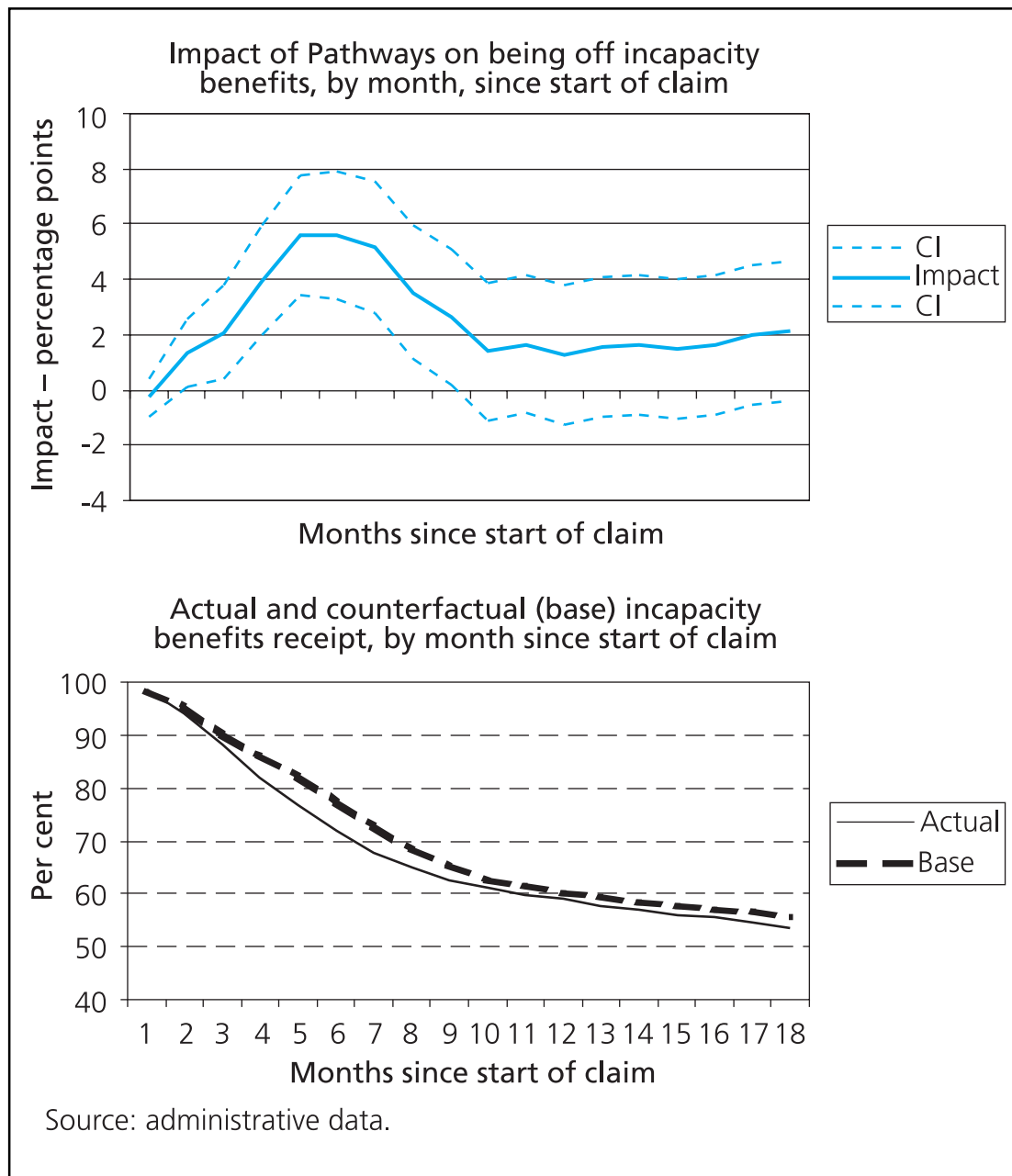


Figure 6.3 Estimates of the effect of Pathways on the probability of not claiming incapacity benefits by month, April 2004 areas – women



The summary statistics in Table 6.2 confirm this overall impression, showing significant reductions in the probability of receiving incapacity benefits continuously throughout the first six months for both men and women, but reductions for months seven to 12 only being significant for men.

Table 6.2 Summary of estimated effects of Pathways on incapacity benefits, April 2004 areas – results by sex

	Impact estimate	P-value	Base	Number of observations
Men				
Effect on probability of a continuous incapacity benefits claim in:				
months 1-6	-6.5**	0	70.9	32,845
months 7-12	-2.8**	1	52.6	32,845
months 13-18	-0.9	38	46.6	32,845
Women				
Effect on probability of a continuous incapacity benefits claim in:				
months 1-6	-5.8**	0	76.5	21,992
months 7-12	-1.1	39	57.4	21,992
months 13-18	-1.5	26	53.1	21,992

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Administrative data.

6.2 Effects of Pathways by age

Table 6.3 compares the effects on those aged under 50 with those aged 50 or more. The effects of Pathways appear to be largely concentrated among the younger age group. In particular, they are more likely to be in work at the time of final interview.

Table 6.3 Estimates of the effects of Pathways on outcomes measured at time of final interview, April 2004 areas – results by age

	Impact estimate	P-value	Base	Sample size
Aged under 50				
In paid work, any hours	10.6*	6	31.3	2,101
Receiving incapacity benefits	-2.9	62	49.3	2,050
Health problem affects day-to-day activity	-7.7	11	85.9	2,027
Health problem affects day-to-day activity 'a great deal'	-13.2**	1	48.0	1,988
Continued				

Table 6.3 Continued

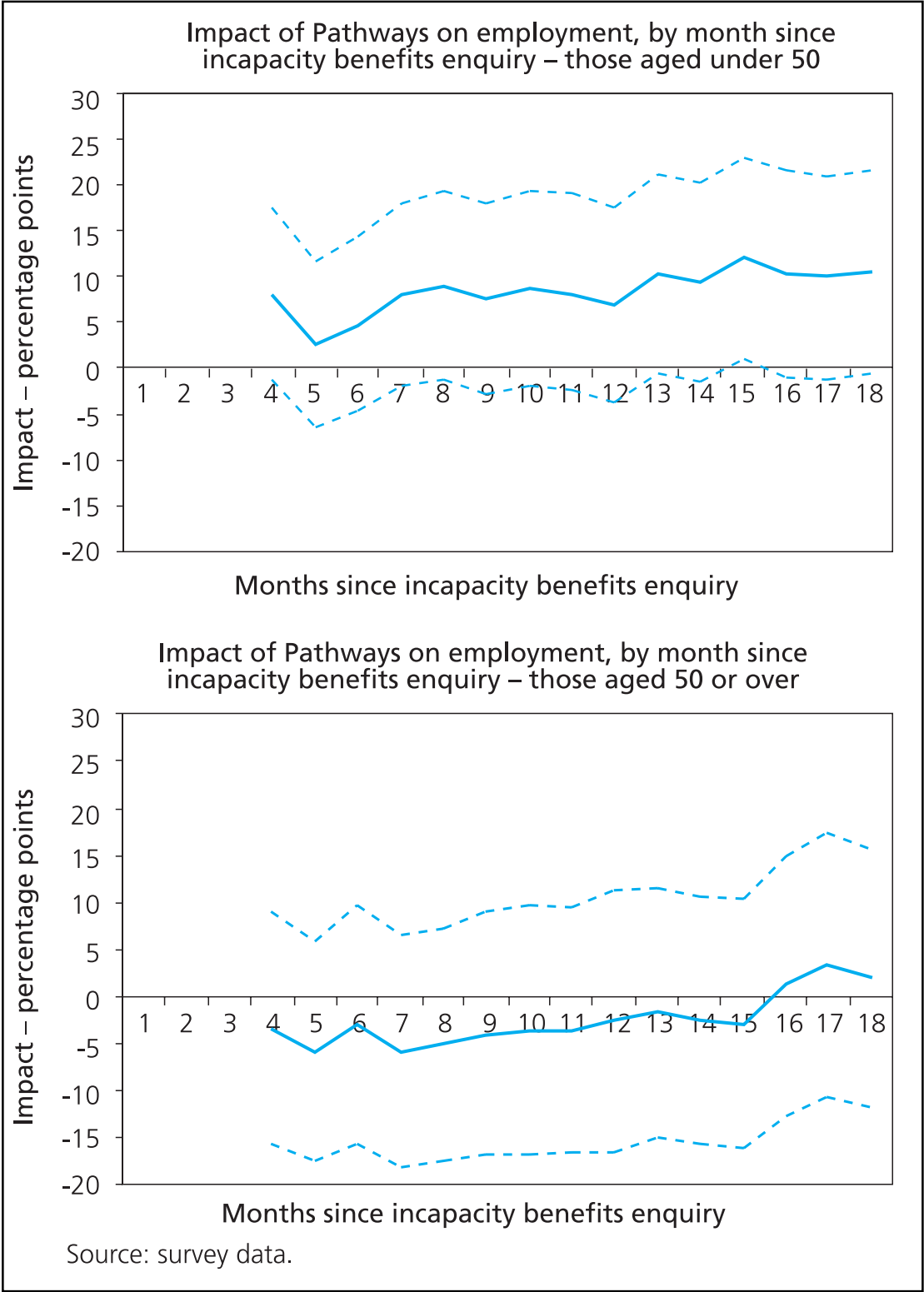
	Impact estimate	P-value	Base	Sample size
Aged 50 or over				
In paid work, any hours	2.3	75	26.7	1,190
Receiving incapacity benefits	-1.2	89	55.5	1,162
Health problem affects day-to-day activity	2.8	56	86.1	1,150
Health problem affects day-to-day activity 'a great deal'	-5.5	53	51.9	1,136

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Survey data.

Figure 6.4 shows that the employment effect on the under-50s remained fairly stable for a number of months, although, again, the significance of this finding is marginal at the conventional level. For those aged 50 or over, the lack of an employment effect of Pathways was consistent. There was no statistically significant effect on receipt of incapacity benefits for either group. With regard to health, Pathways reduced the proportion of individuals aged under 50 who reported a health condition or disability that limited their ability to carry out their day-to-day activities 'a great deal'. For those aged 50 or over, this effect was not statistically significant.

Figure 6.4 **Estimates of the effect of Pathways on the probability of being employed by month, April 2004 areas – results by age**



The effects of Pathways on incapacity benefits receipt by age are shown in Figure 6.5 and Figure 6.6. The estimated effect persists much longer among those aged under 50 than it does among older individuals. Specifically, the effect remains statistically significant until month 14 among the younger group but only until month seven for the older group.

Figure 6.5 Estimates of the effect of Pathways on the probability of not claiming incapacity benefits by month, April 2004 areas – under-50s

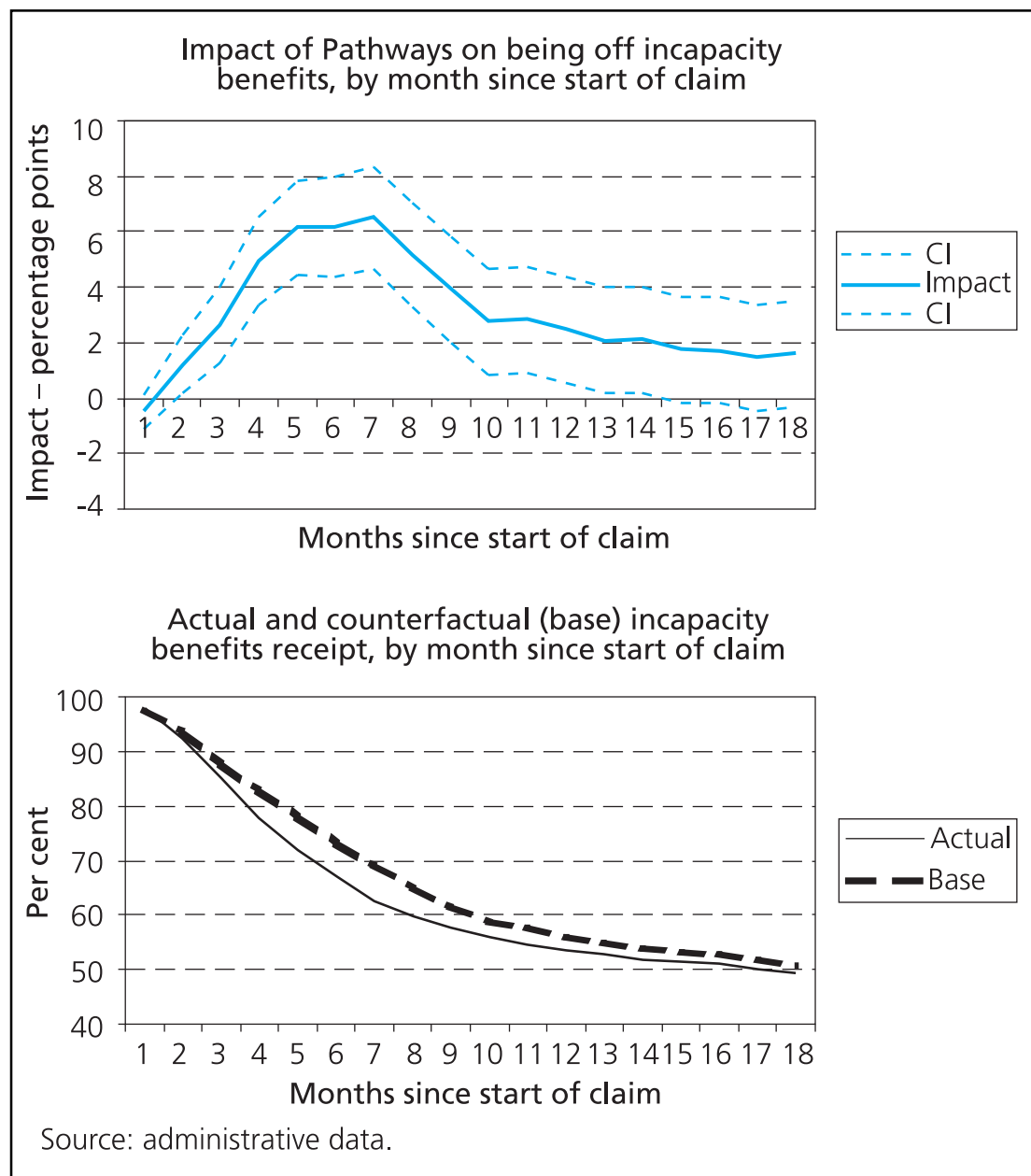
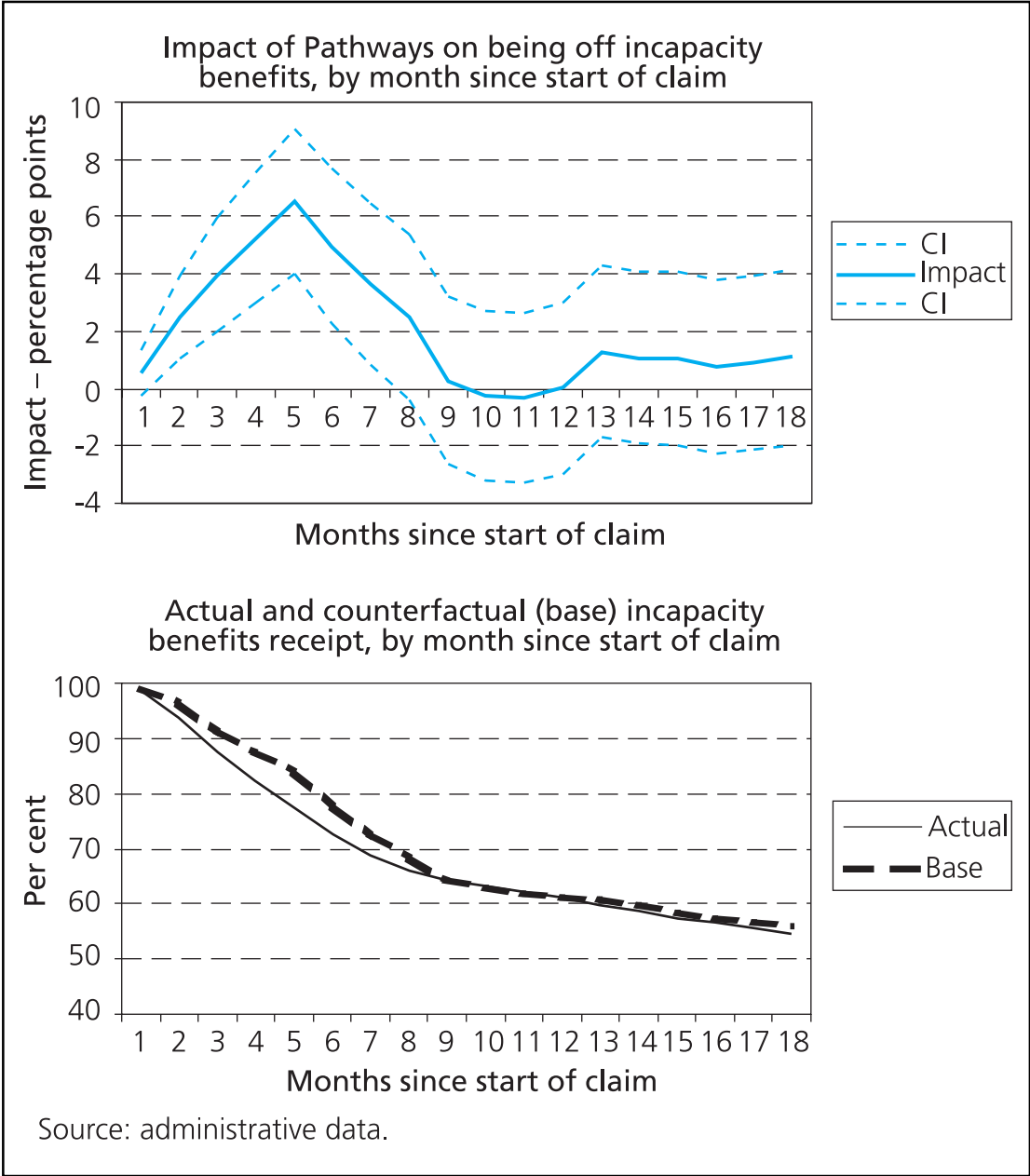


Figure 6.6 Estimates of the effect of Pathways on the probability of not claiming incapacity benefits by month, April 2004 areas – aged 50 plus



The summary statistics in Table 6.4 confirm this overall impression, showing significant reductions in the probability of claiming incapacity benefits continuously throughout the first six months for both age groups, but reductions for months seven to 12 only being significant for those aged under 50.

Table 6.4 Summary of estimated effects of Pathways on incapacity benefits, April 2004 areas – results by age

	Impact estimate	P-value	Base	Number of observations
Aged under 50				
Effect on probability of a continuous incapacity benefits claim in:				
months 1-6	-6.5**	0	71.6	38,730
months 7-12	-2.9**	0	53.0	38,730
months 13-18	-1.1	27	47.3	38,730
Aged 50 or over				
Effect on probability of a continuous incapacity benefits claim in:				
months 1-6	-5.2**	0	76.8	16,107
months 7-12	-0.1	95	58.1	16,107
months 13-18	-1.1	47	53.7	16,107

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Administrative data.

6.3 Effects of Pathways by nature of health problem

The survey questionnaire asked respondents to identify the type of health problems or disabilities associated with their main condition. For those individuals who reported a health problem at the time of the first survey interview, we can distinguish between those whose main condition involved a mental illness and those whose main condition did not. It should be borne in mind when considering the results in this section that it is difficult to get an accurate sense of mental health in the data used in this analysis. Using survey data, only those whose main condition involves a mental illness can be identified.²⁰ Similarly, the administrative data only record a single health condition for each claimant so those with a mental or behavioural disorder that is secondary to their main condition cannot be identified in the data. If it were possible to accurately observe individuals' mental health, it may be that the results would be different.

²⁰ Furthermore, it is possible that survey response differs among those with a mental illness such that they are under-represented in the achieved sample.

Table 6.5 compares the results for these two groups of respondents. From this, it seems that Pathways had no significant effect on outcomes measured at the time of the final interview for those respondents reporting a mental illness. Significant effects were detected for those whose main condition did not involve a mental illness. These respondents were more likely to be in work at the time of the final interview. It is also among this group – and not among those with a mental illness – that Pathways significantly reduced the probability of reporting a health condition or disability that limited the ability to carry out day-to-day activities ‘a great deal’.

Table 6.5 Estimates of the effects of Pathways on outcomes measured at time of final interview, April 2004 areas – by whether main condition involves mental illness

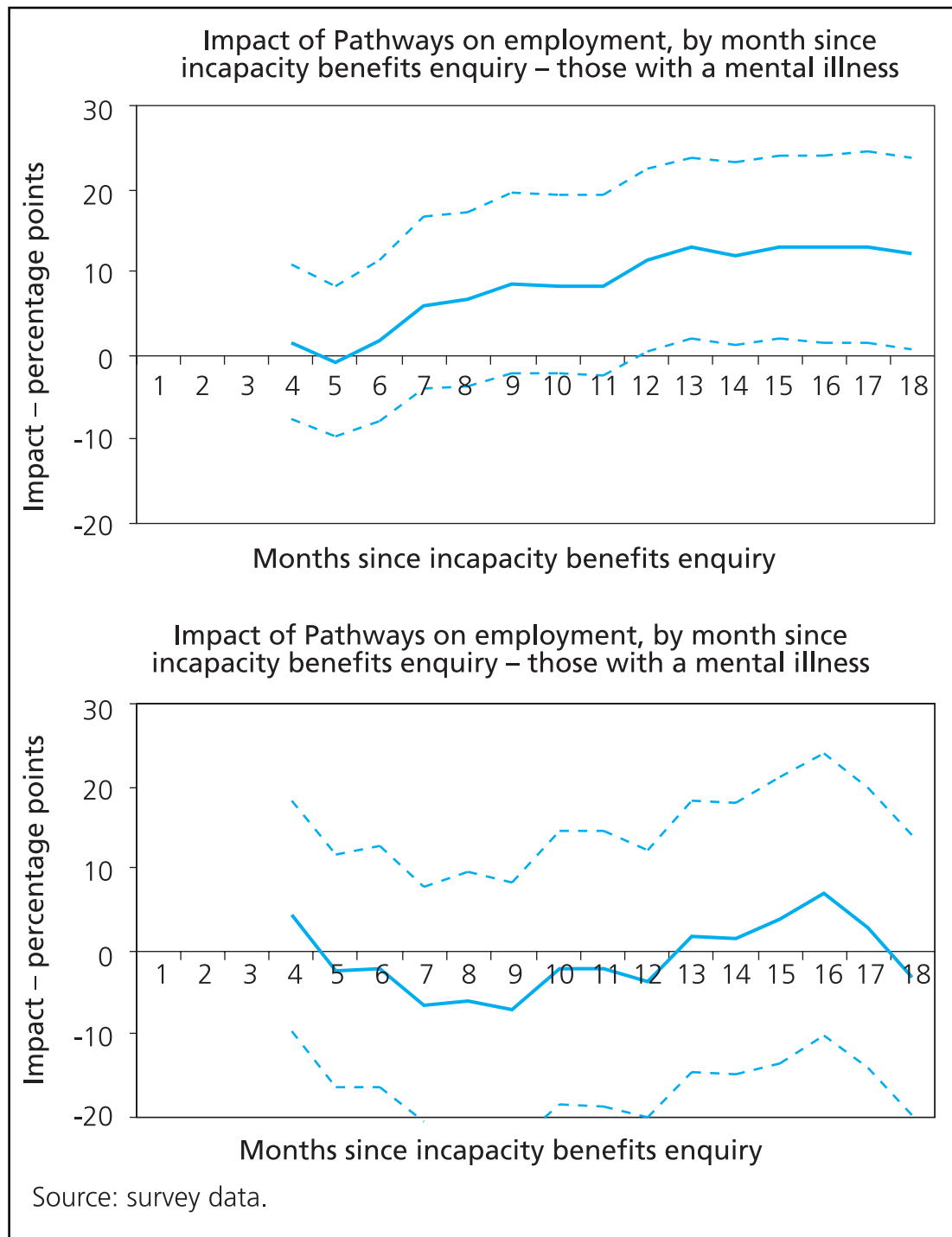
	Impact estimate	P-value	Base	Sample size
No mental illness				
In paid work, any hours	10.7*	6	23.1	1,985
Receiving incapacity benefits	-2.1	73	55.0	1,948
Health problem affects day-to-day activity	-6.6	14	100.0	1,931
Health problem affects day-to-day activity ‘a great deal’	-12.7**	5	57.8	1,912
Mental illness				
In paid work, any hours	-1.1	90	29.4	700
Receiving incapacity benefits	-7.0	49	66.1	674
Health problem affects day-to-day activity	0.6	94	84.5	683
Health problem affects day-to-day activity ‘a great deal’	-8.8	36	48.2	659

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Survey data.

Figure 6.7 reinforces the findings relating to the time of final interview by showing that the stronger employment effects of Pathways for those without a mental illness were consistent across much of the period considered and reasonably stable over the last six months or so. No significant employment effects could be detected at any point for those with a mental illness. However, with this subgroup in particular, the small estimation sample makes it more difficult to detect statistically significant effects.

Figure 6.7 Estimates of the effect of Pathways on the probability of being employed by month, April 2004 areas by whether main condition involves mental illness



Figures 6.8 and 6.9 show the estimated effects based on administrative data for those with no recorded mental or behavioural disorder and those with a recorded mental or behavioural disorder, respectively. Pathways had fairly similar effects across the two groups on the probability of claiming incapacity benefits in each of the first ten months. Beyond this point, however, a difference emerged. Whereas a marginally significant effect persisted for much of the remainder of the period for those with no recorded mental or behavioural disorder, the effects became insignificant for those with a recorded mental or behavioural disorder. It is notable that the counterfactual levels of incapacity benefits receipt were considerably higher among those recorded as having a mental or behavioural disorder.

Figure 6.8 Estimates of the effect of Pathways on the probability of not claiming incapacity benefits by month, April 2004 areas – claimants with no recorded mental or behavioural disorder

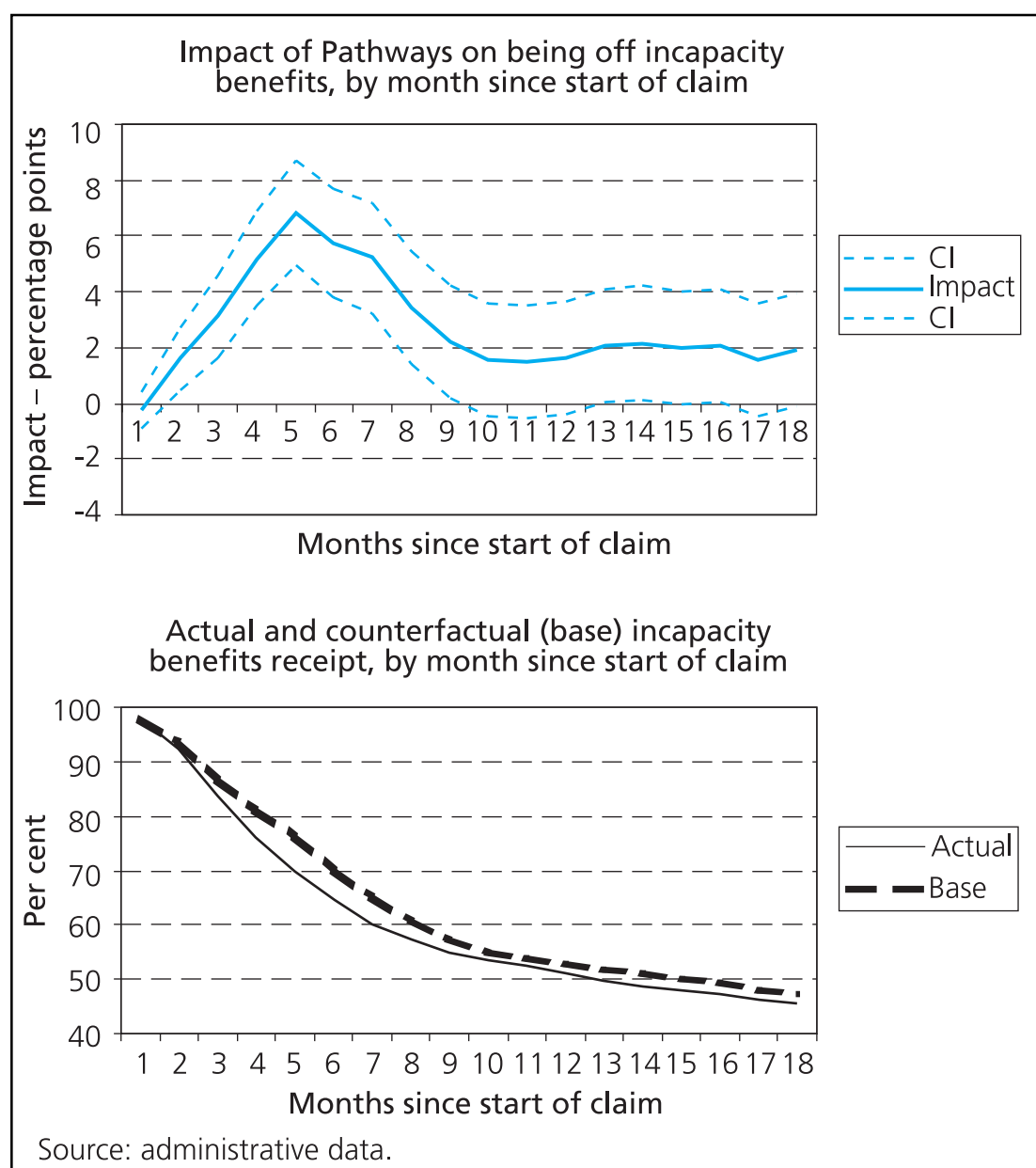


Figure 6.9 Estimates of the effect of Pathways on the probability of not claiming incapacity benefits by month, April 2004 areas – claimants with recorded mental or behavioural disorder

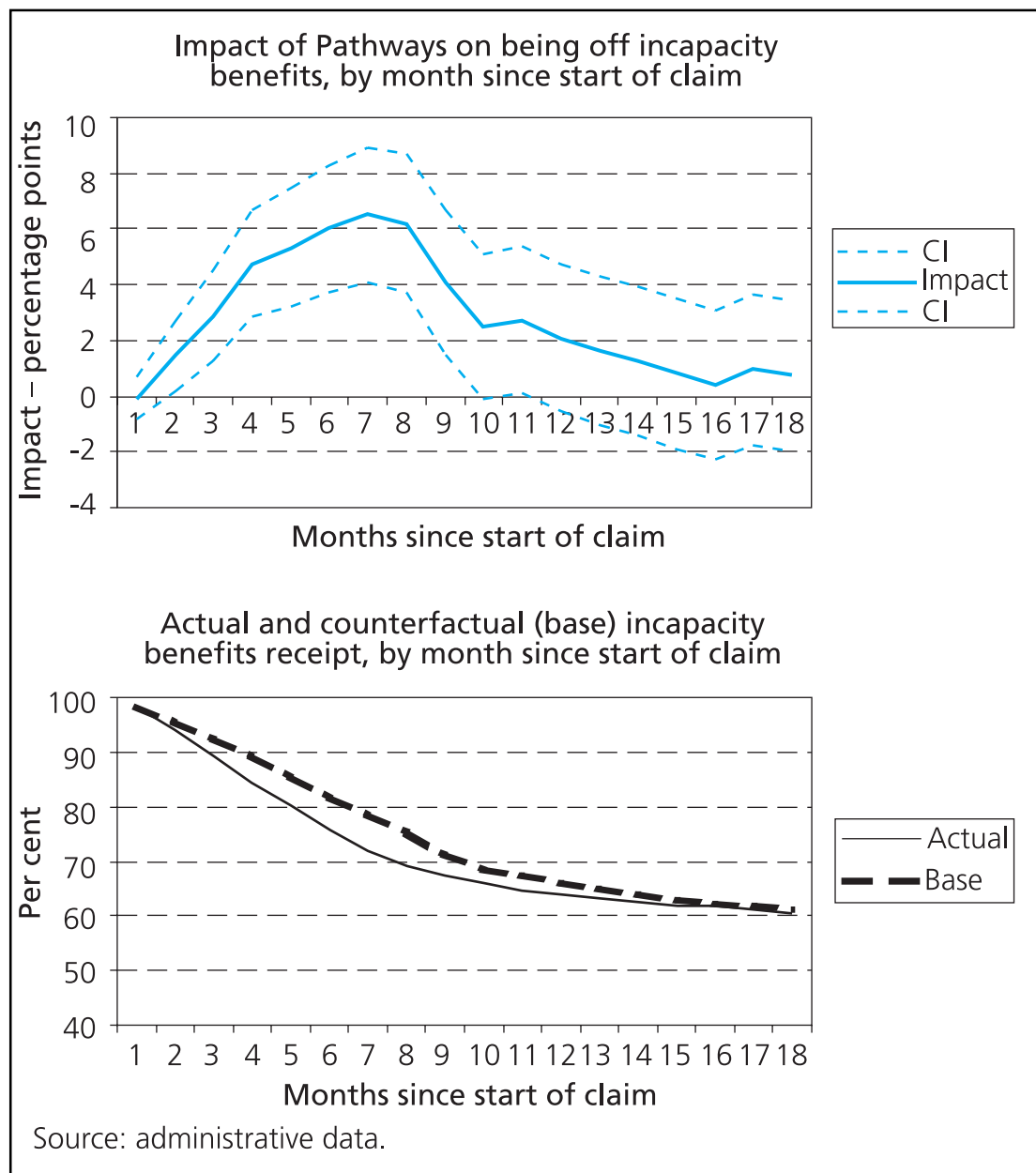


Table 6.6 summarises the effects shown in Figure 6.9. The similarity of the effects across the two groups in both months one to six and seven to 12 is evident.

Table 6.6 Summary of estimated effects of Pathways on incapacity benefits, April 2004 areas – results by whether main condition is a mental or behavioural disorder

	Impact estimate	P-value	Base	Number of observations
Not mental or behavioural disorder				
Effect on probability of a continuous incapacity benefits claim in:				
months 1-6	-5.9**	0	68.9	35,434
months 7-12	-1.9*	6	49.6	35,434
months 13-18	-1.5	15	44.3	35,434
Mental or behavioural disorder				
Effect on probability of a continuous incapacity benefits claim in:				
months 1-6	-6.6**	0	80.6	19,403
months 7-12	-2.4*	8	63.0	19,403
months 13-18	-0.5	73	57.7	19,403

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Administrative data.

6.4 Effects of Pathways by presence of dependent children

In the final section of this chapter, the results for those with and without dependent children are considered. Unlike the other subgroups, it is not possible to use administrative records to explore the differences between those with and without children since the information available on the presence or absence of children in the household is unreliable. Consequently, only survey outcomes are considered. Table 6.7 shows that, despite the small sample size for those with dependent children, stronger employment effects are evident than for those without dependent children. This is confirmed by the significant (albeit slightly erratic) month-by-month employment effects for those with dependent children shown in Figure 6.10. It also appears from Table 6.7 that Pathways reduced the probability of those with dependent children reporting a health problem that limits day-to-day activities. However, in view of the small sample size, it seems prudent not to over-interpret this result, especially since there is no corresponding effect among those with dependent children on the probability of reporting a health problem that limits day-to-day activities 'a great deal'. Among those without dependent children, Pathways does appear to reduce the probability of reporting a health problem that limits day-to-day activities 'a great deal'.

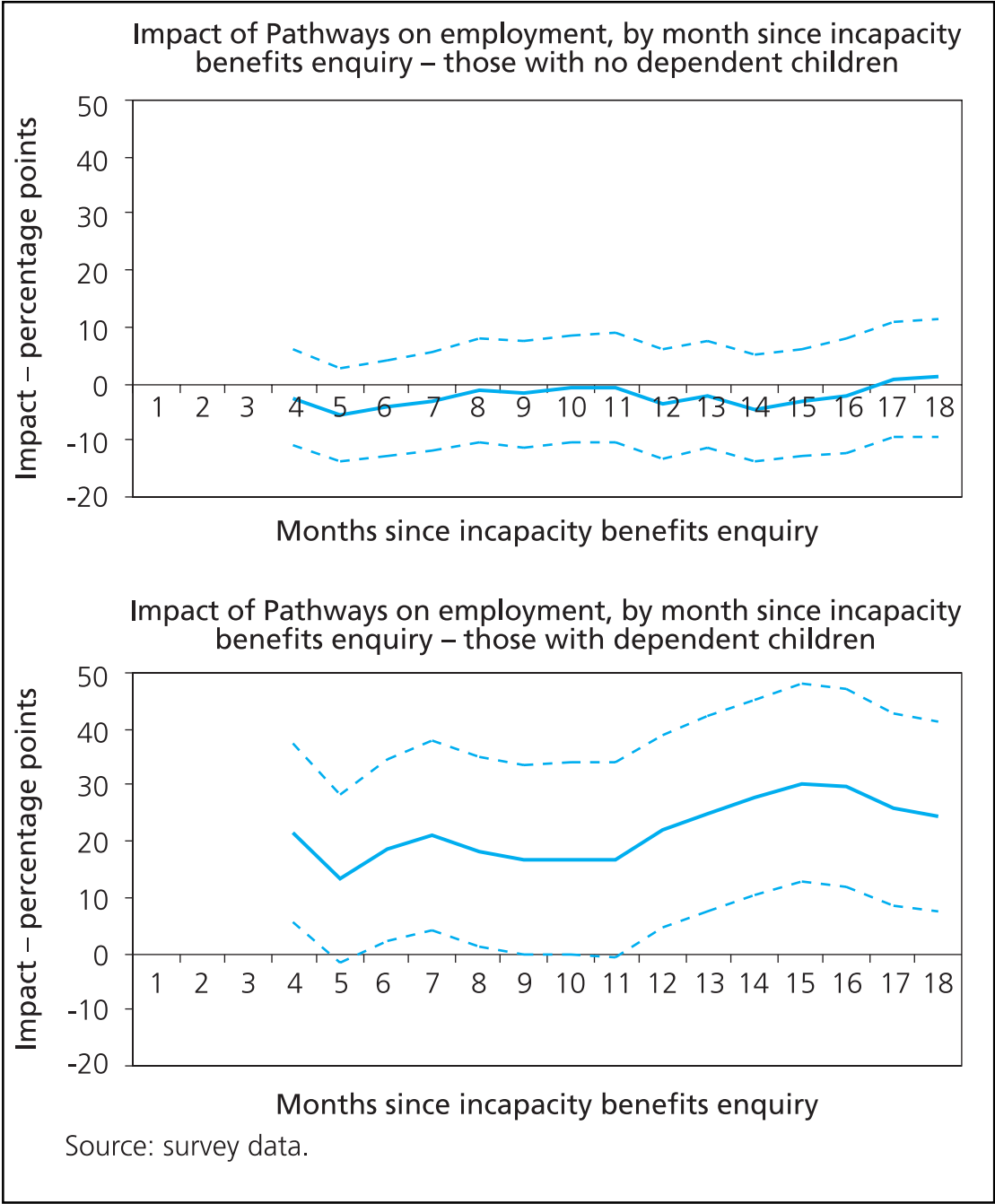
Table 6.7 Estimates of the effects of Pathways on outcomes measured at time of final interview, April 2004 areas – by presence of dependent children

	Impact estimate	P-value	Base	Sample size
No dependent children				
In paid work, any hours	3.5	49	31.2	2,416
Receiving incapacity benefits	1.6	78	49.2	2,347
Health problem affects day-to-day activity	1.4	72	81.9	2,330
Health problem affects day-to-day activity 'a great deal'	-10.4*	5	51.2	2,288
Dependent children				
In paid work, any hours	17.6**	4	27.1	875
Receiving incapacity benefits	-8.4	34	53.4	865
Health problem affects day-to-day activity	-20.0**	1	98.0	847
Health problem affects day-to-day activity 'a great deal'	-8.2	32	41.6	836

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Survey data.

Figure 6.10 Estimates of the effect of Pathways on the probability of being employed by month, April 2004 areas – by presence of dependent children



7 Conclusion

The Pathways to Work package of reforms ('Pathways', for short) is aimed at encouraging employment among people claiming incapacity benefits. The reforms were introduced on a pilot basis in three Jobcentre Plus districts in October 2003 (the 'October 2003' areas). Four further districts became part of the pilot in April 2004 (the 'April 2004' areas).²¹ Under Pathways, claimants become eligible for increased financial and non-financial support which aims to encourage a return to work and most must attend a series of Work Focused Interviews (WFIs).

This report presents the results of an evaluation of the overall effect of Pathways. The evaluation is based both on survey interviews with a sample of individuals making an initial enquiry about claiming incapacity benefits and on administrative data on individuals commencing an incapacity benefits claim. The outcomes considered include employment, earnings, incapacity benefits receipt and self-reported health status. A difference-in-differences approach is used to estimate what would have happened in the absence of Pathways and thereby an estimate of the overall impact of the reform. Estimation is performed using regression techniques so that the effects of observed characteristics on outcomes can be controlled for, ensuring that individuals in Pathways areas are implicitly compared with similar individuals in the comparison areas.

The results in this report build on the early findings presented in Adam *et al.* (2006) in three important ways: First, the analysis in the current report considers a cohort of individuals making an incapacity benefits claim some time after Pathways was introduced. It is possible that the delivery of Pathways would take some time to settle down after its introduction. Considering a cohort of individuals commencing an incapacity benefits claim once Pathways has had an opportunity to settle down therefore increases the chances that the resulting estimated effects capture the 'steady-state' impact of Pathways. Second, the data used in this report allow longer-term outcomes to be considered. Whereas Adam *et al.* (2006) reported outcomes an

²¹ Since then, Pathways has been expanded to cover more Districts so that by December 2006 it covered 40 per cent of the country.

average of 10½ months after individuals made their initial incapacity benefits enquiry, the survey data used in the current report allow outcomes roughly a year and a half after initial enquiry to be considered. Third, this report also presents results estimated using administrative data. This has the standard advantages of administrative data (large estimation samples, no survey non-response bias, no recall error) as well as the standard drawback (less information on the characteristics of individuals). However, it also allows tests to be carried out to explore the assumptions underlying the evaluation approach.

Using administrative data to test the evaluation assumptions provided the important result that the estimates based on survey data in the October 2003 areas may be unreliable. In view of this, the main focus for the survey data results is on the April 2004 areas. The analysis based on administrative data is unaffected by this problem and the results for both the October 2003 and April 2004 areas remain valid. The results based on administrative data provide a useful comparison for the results based on survey data. The fact that the estimates of the effect of Pathways on incapacity benefits receipt are very similar across the two data sources increases the confidence we can have in the results based on the survey data.

The evaluation results suggest that Pathways significantly increased by 7.4 percentage points the probability of being employed at the time of the survey interview – about a year and a half after the original incapacity benefits enquiry. Without Pathways, it is estimated that 29.7 per cent of individuals would have been in work (Table 5.1).²² This employment effect was quite stable over the latest six or so months observable (Figure 5.1). Adam *et al.* (2006) found that, about 10½ months after the initial enquiry, Pathways increased the probability of being employed by 6.1 percentage points in the April 2004 areas. In the current report, the estimated impact at ten months, of 4.2 percentage points, was quite similar to that found in the report by Adam *et al.* (2006). However, it was not statistically significant. This may simply be due to the smaller available sample on which the estimates are based.

In view of the employment effect of Pathways, one would expect a positive impact on earnings. However, the small sample size on which the estimates are based makes it difficult to detect such an effect since earnings can only be observed for the minority of individuals who are in work. It is, therefore, not surprising that no statistically significant impact of Pathways on monthly net earnings at the time of interview was found (Table 5.2). Furthermore, it is not possible, with the survey data, to observe earnings between the time of the initial enquiry and the outcome interview; it is possible that there may have been an earnings effect during this period. The finding of no earnings effect is consistent with Adam *et al.* (2006) who similarly failed to find a significant effect 10½ months after the time of the initial enquiry in the April 2004 areas (although they did find an effect in the October 2003 areas).

²² This conclusion contains references to tables and charts which appear in earlier chapters of the report.

The effect of Pathways on incapacity benefits receipt about a year and a half after the initial enquiry was small and not statistically significant (Table 5.3). Adam *et al.* (2006) found similar results for the April 2004 areas about 10½ months after the initial enquiry. Using administrative data, more precise estimates were possible due to the larger number of observations available for analysis. Estimates based on administrative data were of a marginally significant reduction of 1½ percentage points in the probability of claiming incapacity benefits a year and a half after the start of claim, from a base of 52 per cent (Figure 5.2). This is very similar in size to the estimate based on survey data – a reduction of 1.7 percentage points from a base of 51 per cent. Using the administrative data allows the effect on incapacity benefits receipt to be estimated for each month following the start of the incapacity benefits claim. This showed that Pathways reduced incapacity benefits receipt by a maximum of 6.3 percentage points five months after the start of the claim. Without Pathways, the level of receipt would have been 80 per cent at this time. The seemingly stable long-term effect of 1½ to two percentage points was reached in month ten.

The finding that Pathways appears to have a long-term positive effect on employment but was not found, using survey data, to significantly reduce receipt of incapacity benefits a year and a half after the initial enquiry, bears some similarity to the finding in Adam *et al.* (2006) that, while early impacts of Pathways on both employment and benefit could be found, these operated through different groups of individuals. Further analysis (Table 5.5) showed that Pathways significantly increased, by 8.7 percentage points, the probability of **working** and **not** receiving incapacity benefits a year and a half after the enquiry and that this was mostly accounted for by a significant decrease of 6.9 percentage points in the probability of **not working** and **not** receiving incapacity benefits. Taken together, these results suggest that Pathways increased the likelihood of work among those not receiving incapacity benefits a year and a half after the original incapacity benefits enquiry. Among those not in work and not receiving incapacity benefits, 19 per cent were claiming Jobseeker's Allowance (JSA) at the time of the final interview (further analysis not reported here shows that Pathways significantly reduced the probability of claiming JSA among those not in work and not receiving incapacity benefits a year and a half after the enquiry). Thirty per cent had recently looked for work and 62 per cent reported looking after the home or family in the four weeks prior to the final interview.

The final outcome considered was the self-reported health of the survey respondents. Pathways was not found to have a statistically significant effect on the probability of individuals stating that they had a health condition or disability that limited their ability to carry out their everyday activities. This is similar to the result in Adam *et al.* (2006) for the April 2004 areas. However, the current report did find that Pathways significantly reduced the probability of respondents reporting that they had a health condition or disability that limited their ability to carry out their everyday activities 'a great deal' by 10.8 percentage points from a base of 49.8 per cent (Table 5.7). As discussed in Chapter 5, there are reasons why one should treat these findings on self-reported health with some caution; it is possible that this outcome is partly

influenced by changes in how individuals report their health due to moving into work rather than changes in the nature of their medical condition or in the extent to which impairment limits their activities. However, the reduction in the probability of reporting a substantial health-related limitation on everyday activities, apparently due to the effect of Pathways, is larger and more significant than the employment effect, suggesting that the estimated effect may be real. In further support of this, in some of the sub-groups considered (see below) the estimated effect of Pathways on the probability of individuals reporting a health condition or disability that limits their ability to carry out their everyday activities 'a great deal' was significant despite there being no significant effect on employment. This provides some reassurance that the positive estimated effects of Pathways on individuals' abilities to cope with everyday activities are meaningful. Such an effect is an important finding and entirely consistent with design and aim of Pathways. Specifically, part of the rationale for Pathways was that work can have positive medical benefits. In terms of provision, the Condition Management Programme (CMP) aims to help individuals better understand and manage their health condition.

The effects of Pathways were also estimated for population subgroups. Such estimates are based on smaller sample sizes. This reduces the precision of estimates and makes it more difficult to detect statistically significant effects. It should be noted that the comparisons across subgroups do not control for differences in composition between the two subgroups. Consequently, while the results can show that Pathways had a greater effect on some subgroups than others, this difference is not directly attributable to the characteristic that identifies the subgroup.

There was evidence of variation among subgroups of the eligible population. Unlike the results for the April 2004 areas as a whole, comparison of these subgroup results with those in Adam *et al.* (2006) is complicated by the fact that the subgroup analysis in that early report was based on the October 2003 and April 2004 areas combined.

In the current report, Pathways appeared to have stronger employment effects on women than men. On the other hand, the proportion reporting their ability to carry out everyday activities was limited 'a great deal' by their health condition or disability was reduced most significantly amongst men (Table 6.1). The effect on incapacity benefits receipt over the year and a half since start of claim was stronger for men than for women (Table 6.2).

With regard to differential effects of Pathways by the age of the claimant, there were stronger effects on employment and benefit receipt among those aged under 50 (Table 6.3, Table 6.4). Pathways also reduced the probability of individuals aged under 50 reporting their ability to carry out everyday activities was limited 'a great deal' by their health condition or disability. There was no such effect among those aged 50 or over.

It was not possible to detect a statistically significant effect of Pathways on the employment or self-reported health of those whose main health condition at the time they were first interviewed involved mental illness (Table 6.5). For both

outcomes, it is among those whose original health condition did not involve mental illness that we were able to identify a significant Pathways impact. There was little difference between the two groups in the effect of Pathways on incapacity benefits receipt (Table 6.6).

Lastly, Pathways appeared to have a stronger employment effect on those with dependent children (Table 6.7).

As a summary comment on the subgroup analysis, it should be noted that, although no evidence was found that Pathways increased employment among some subgroups, Pathways did increase the probability of not claiming incapacity benefits in the first year or so following the start of claim for all subgroups where this could be estimated.

Overall, the results in this report are encouraging. They show that the positive employment effects detected in Adam *et al.* (2006) for a cohort of individuals making an enquiry about incapacity benefits shortly after Pathways was introduced can be found also in a later cohort making their initial enquiry some time after Pathways was introduced. This provides some reassurance that the original positive estimated effects were genuine. Furthermore, the results in this report provide the first indication that the effects may be sustained in the medium term since the positive employment effects relate to a period of time about a year and a half after they initially got in touch with the contact centre to enquire about claiming incapacity benefits.

However, it is important to be clear that there is no particular reason to expect the findings in Adam *et al.* (2006) and the current report to be the same. The Adam *et al.* (2006) results relate to the effect of Pathways on individuals making an incapacity benefits enquiry just after Pathways was launched in the April 2004 areas. A quick inspection of Figure 1.1 is enough to confirm that the off-flow rates from incapacity benefits have changed substantially since the introduction of Pathways – particularly for the October 2003 areas – so the estimated effects are specific to a particular time. The main motivation for the analysis in the current report was the need to estimate the effect of Pathways once it had had a chance to settle down. In this regard, this report should be seen as complementary to Adam *et al.* (2006).

It should be noted that, while an effect of Pathways on employment was found, the type of employment encouraged by Pathways will not always be full-time. Those claiming incapacity benefits may face particular constraints on the amount of work they are able to do. Some health conditions or disabilities may limit individuals' ability to work more than a small number of hours per week. Other individuals will have caring responsibilities which similarly prevent them from working more than a small number of hours per week. Another factor to consider is the Permitted Work rules. These allow incapacity benefits claimants to be employed in a job paying up to £20 a week. They can also work for less than 16 hours a week (on average) for up to

a year so long as earnings do not exceed £86 a week.²³ Such employment can last beyond one year as long as an individual is receiving support in employment from a recognised provider or is assessed as having a sufficiently severe condition or disability that they meet the criteria for exemption from the Personal Capability Assessment (PCA). The rules aim to help claimants to try some work while continuing to receive benefits, with a view to their eventual movement into more substantial employment. Under Pathways, Incapacity Benefit Personal Advisers (IBPAs) promoted permitted work for incapacity benefits claimants. This may offer a partial explanation for finding an effect of Pathways on employment but not on incapacity benefits receipt at the time of the final interview.

The results have shown that Pathways reduced the probability of claiming incapacity benefits in the first six months following the start of the claim and that this effect slowly declined thereafter to a sustained level of about 1-1½ percentage points. There are two scenarios that can explain this decline in the effect: The first is that those individuals who exited incapacity benefits because of Pathways subsequently returned. This might be expected to be the case if, for example, Pathways improved knowledge of linking rules such that individuals were more willing to try working in the knowledge that they could return to claiming incapacity benefits if it turned out not to be suitable. The second scenario is one where the declining effect of Pathways is caused by the counterfactual 'catching up'. It may be that the long-term position among those eligible for Pathways would have been reached in any case but Pathways acted to accelerate the movement away from incapacity benefits. In other words, Pathways may have caused people to leave incapacity benefits earlier than they otherwise would have done but, over time, the counterfactual level of incapacity benefits exits grew to close the gap.

It is not possible to distinguish between these two alternative explanations and it may indeed be the case that both play a partial role. However, the fact that Pathways has an effect on the probability of employment that persists beyond the point at which the effect on benefits has largely disappeared, provides support for the belief that Pathways does not merely serve to bring about a situation that would have arisen regardless but that it alters the nature of exits from benefit, and subsequent changes in labour market status, in a meaningful way such that a higher proportion of those no longer receiving incapacity benefits are in work.

It is also perhaps consistent with the structure of Pathways that exits from incapacity benefits should be concentrated in the first six months or so of the claim starting. One factor that may contribute to this is the accelerated PCA process under Pathways. Since the results of the PCA should be available much sooner than previously, those judged by the PCA not to qualify for incapacity benefits will leave

²³ An important point though is that for those on Incapacity Benefit (IB), such earnings have no effect on the amount of benefit paid, while for those claiming Income Support (IS), any earnings over £20 are counted against benefit entitlement.

incapacity benefits more swiftly than was previously the case. Another potential explanation may be that it is in the first six months that most WFIs take place and that perhaps it is the intense, face-to-face nature of early Pathways engagement that is most important in influencing labour market outcomes. Since only about a fifth of those having an initial WFI go on to participate in Choices, for the majority of claimants it is the WFIs themselves that will constitute the main element of the Pathways process. If this were the case, one might expect most impacts to occur while individuals are still attending WFIs.

Finally, it should be noted that while this report presents the findings for the overall effect of Pathways on new claimants in the original pilot areas, other analyses underway as part of the broader evaluation programme will add to these results in important ways. These include investigations of the effect of particular components of the Pathways package; consideration of how the effects may generalise to areas where Pathways does not yet operate; an assessment of the extent to which Pathways may have indirect or 'spillover' effects on other people; and, an evaluation of the effect of the extension of Pathways to those individuals who already had an incapacity benefits claim at the time Pathways was introduced for new claimants. The net benefit of the programme is being rigorously examined through a detailed cost-benefit analysis. In addition, a separate evaluation of the expansion of Pathways to new areas is also being carried out.

Appendix A

Results for October 2003 areas

This appendix provides the results of estimating Pathways in the October 2003 areas. As detailed in Chapter 4, the failure of the pre-programme tests in the October 2003 areas reduced the confidence we can have in the impact estimates for these areas that are based on survey data.²⁴ Consequently, the results based on the survey data are presented without any commentary or interpretation.

²⁴ There is a number of other concerns over the survey data in the October 2003 area which reduce confidence in the results: the October 2003 pre-Pathways comparison area sample was drawn from a different database from that used for the other samples; there was a longer delay between start of claim and first interview for individuals in the October 2003 pre-Pathways comparison area sample than there was between incapacity benefits enquiry and first interview for the other samples; there was a longer delay between start of claim and outcome interview for individuals in the October 2003 pre-Pathways comparison area sample than there was between incapacity benefits enquiry and outcome interview for the other samples; and, Jobcentre Plus roll-out was less established in the October 2003 pre-Pathways comparison areas sample than in the October 2003 pre-Pathways pilot areas sample.

Table A.1 Estimates of the effects of Pathways on employment outcomes, October 2003 areas

	Impact estimate	P-value	Base	Sample size
In paid work at time of interview, any hours	3.2	38	28.3	2,491
In paid work at time of interview, 16 hours or more	2.2	53	24.6	2,451
In paid work at time of interview, 30 hours or more	1.2	70	17.7	2,451

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level. The results in rows 2 and 3 are based on fewer observations than the results in row 1 since not all respondents in work provided useable information on their hours of employment.

Source: Survey data.

Table A.2 Estimate of the effects of Pathways on net monthly earnings, October 2003 areas

	Impact estimate	P-value	Base	Sample size
Monthly net earnings at time of interview (£)	19.96	57	229.34	2,491

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Survey data.

Table A.3 Estimates of the effects of Pathways on incapacity benefits receipt and combined employment/incapacity benefits status, October 2003 areas

	Impact estimate	P-value	Base	Sample size
Receiving incapacity benefits	-2.4	53	55.0	2,427
In work, not receiving incapacity benefits	5.5	13	23.0	2,427
In work, receiving incapacity benefits	-0.3	84	3.5	2,427
Not in work, not receiving incapacity benefits	-3.1	39	22.1	2,427
Not in work, receiving incapacity benefits	-2.2	57	51.5	2,427

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Survey data.

Table A.4 Estimates of the effects of Pathways on self-reported health, October 2003 areas

	Impact estimate	P-value	Base	Sample size
Health problem affects day-to-day activity	-2.3	41	83.4	2,415
Health problem affects day-to-day activity 'a great deal'	-5.9	13	43.5	2,371

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Survey data.

The estimated effects of Pathways on incapacity benefits receipt in the October 2003 areas are presented in Figure A.1. This shows that Pathways increased the likelihood of not claiming benefits in the period following the start of the claim. The size of this effect peaked in the fourth month at 4.6 percentage points (from a base of 83 per cent). This is slightly smaller than the corresponding maximum effect in the April 2004 areas (6.3 percentage points) although the timing of the effect is comparable. From month eight onwards, the effect is statistically insignificant at conventional levels. Again, this differs from the April 2004 areas which retained a marginally significant effect of 1.5 to two percentage points up to month 18. Overall, the effect of Pathways on incapacity benefits receipt appears smaller and less sustained in the October 2003 areas than in the April 2004 areas.

Figure A.1 **Impact of Pathways on being off incapacity benefits by month, October 2003 areas**

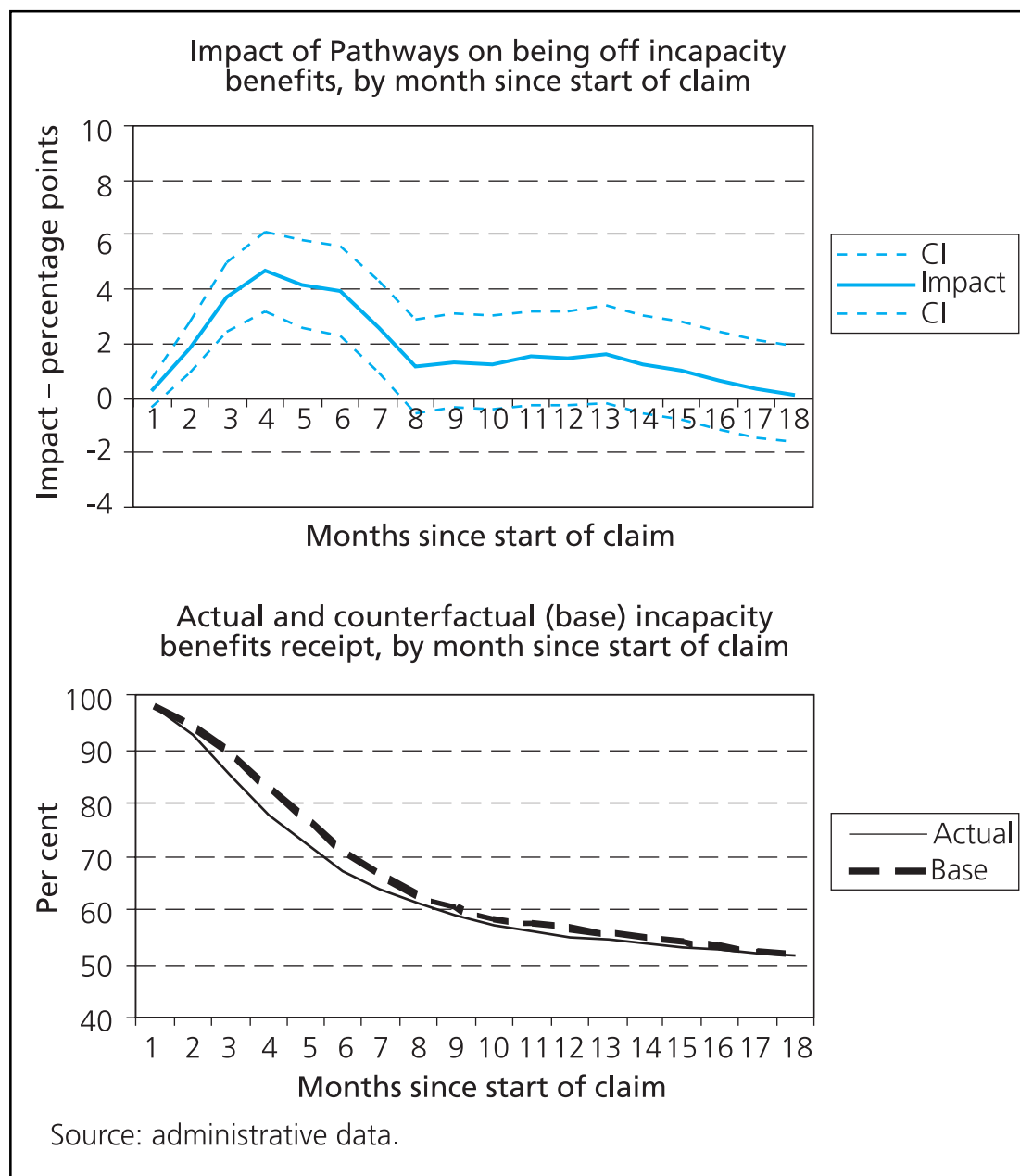


Table A.5 Effect of Pathways on receipt of incapacity benefits receipt – summary measures for October 2003 areas

	Impact estimate	P-value	Base	Number of observations
Effect on probability of a continuous incapacity benefits claim in:				
Months 1-6	-4.3**	0	69.8	45,679
Months 7-12	-1.2	18	52.6	45,679
Months 13-18	-0.4	69	48.5	45,679

Note: See start of Chapter 5 for explanation of table format. ** denotes statistical significance at the 5 per cent level; * at the 10 per cent level.

Source: Survey data.

Appendix B

List of publications from the evaluation

The reports that have been produced to date as part of the evaluation of Pathways are set out below:

'Pathways to Work: Extension to existing customers (matched case study)', National Centre for Social Research, DWP Report No. 418), 15 March 2007.***

'Pathways to Work: Findings from the final cohort in a qualitative longitudinal panel of incapacity benefit recipients', Social Policy Research Unit, DWP Report No. 398, 31 October 2006.*

'Early quantitative evidence on the impact of Pathways to Work pilots', Institute for Fiscal Studies, DWP Report No. 354, 1 June 2006.*

'Pathways to Work from Incapacity Benefits: A study of experience and use of Return to Work Credit', Social Policy Research Unit, DWP Report No. 353, 1 June 2006.*

'Incapacity Benefit Reforms Pilot: Findings from the second cohort in a longitudinal panel of clients', Social Policy Research Unit, DWP Report No. 345, 11 April 2006.*

'Pathways to Work: Qualitative research on the Condition Management Programme', Policy Studies Institute, DWP Research Report No. 346, 11 April 2006.*

'Pathways to Work – extension to some existing customers: Early findings from qualitative research', Policy Studies Institute, DWP Report No. 323, 28 February 2006.*

Incapacity Benefit reforms – the Personal Adviser role and practices: Stage Two, National Centre for Social Research, DWP Report No. 278, September 2005.**

IB Reforms Pilot: Findings from a longitudinal panel of clients, Social Policy Research Unit, DWP Report No. 259, July 2005.**

Incapacity Benefit Reforms – The Personal Adviser Role & Practices, National Centre for Social Research, DWP Report No. W212, November 2004 ***

Incapacity Benefit Reforms – Early findings from qualitative research, National Centre for Social Research, DWP Report No. W202, September 2004 ***

***Report available from <http://www.dwp.gov.uk/asd/asd5/rrs2007.asp>

*These reports are available from: <http://www.dwp.gov.uk/asd/asd5/rrs2006.asp>

**These reports are available from <http://www.dwp.gov.uk/asd/asd5/rrs2005.asp>

***These reports are available from http://www.dwp.gov.uk/jad/index_2004.asp

The following analyses of DWP administrative data are also available:

Incapacity Benefit reforms – Pathways to Work Pilots performance and analysis, Billy Blyth, DWP Working Paper No. 26, January 2006.

This Working Paper is available from <http://www.dwp.gov.uk/asd/asd5/wp2006.asp>

More recent stats (May 2007) are at:

http://www.dwp.gov.uk/asd/workingage/pathways2work/pathways_perf_0507.pdf

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Heckman, J. J. and Hotz, V. J. (1989) 'Choosing Among Alternative Nonexperimental Methods for Estimating the Impact of Social Programs: The Case of Manpower Training' *Journal of the American Statistical Association*, 84, 408, 862-874.

Woodward, A., Kazimirskia, A., Shaw, A. and Pires, C. (2003) 'New Deal for Disabled People. Evaluation. Eligible population survey. Wave one. Interim report', Research Report No. W170, DWP.

