Simple but effective: Local solutions for adults facing multiple deprivation

Adults facing Chronic Exclusion evaluation – final report
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The findings and recommendations in this report are those of the authors and do not necessarily represent the views of the Department for Communities and Local Government.
1. Executive summary

This report addresses the question of whether “the Adults facing Chronic Exclusion pilots have succeeded or not in delivering their projected outcomes for service users and services, and have they been cost effective?”

1.1 Approach to the evaluation

Based on the outcomes for the Adults facing Chronic Exclusion programme and the individual pilots’ objectives, the evaluation looked at the following outcome measures:

- accommodation status
- employment status
- use of health services
- receipt of benefits
- offending and victimisation; and
- subjective health and well-being.

The evaluation had three parts: process, impact and cost effectiveness studies. Each was based on an understanding of each pilot’s interventions.

1.2 Client characteristics

The client group lived chaotic or isolated lives and were hard to reach. Either they were reluctant or unable to engage with local services, or local services were unable or unwilling to engage with them. These conditions were chronic; in other words, long standing and seemingly intractable. Overall the clients demonstrated a:

- risk to themselves or to others
- lack of resilience to overcome traumatic events; and
- lack of positive relationships in their personal lives or with local services.

The clients tended to lack relationships with other adults that were marked by consistency and trust. The role of the consistent, trusted adult was often filled by the workers in the pilots themselves.
1.3 Summary of research findings

The Adults facing Chronic Exclusion programme contains 12 pilots that differed in terms of the characteristics of their clients, the intervention, the cost of the service and their outcomes. Despite these differences, the pilots were all tasked to help clients access local services and benefits (system navigation), support clients over say, the move from rough sleeping to hostel (transition points in their lives) and change the way in which local agencies responded to the needs of the clients (system change). In most cases, service provision centred on the offer of support from a consistent, trusted adult, who built a trusted relationship with a client.

1.3.1 System navigation

The evaluation found that the pilots were successful in getting clients to use health services more appropriately, with less use of the emergency services and increasing access to outpatient appointments. The receipt of benefits also increased, indicating that clients were accessing the welfare assistance to which they were entitled. Here, the biggest changes were receipts of Income Support and housing-related benefit (which supported accommodation outcomes).

1.3.2 Transition points

The success of a pilot in supporting clients with transition points was measured by changes in accommodation status, employment and offending. The clients’ normal accommodation improved in the two pilots that sought to move them from homelessness to accommodation. It remained stable in the other areas, reflecting the status of those clients who were either in good accommodation or being stabilised in temporary accommodation. Few of the pilots actively addressed their clients’ employment needs, which was a longer-term outcome for their particular clients and required longer-term interventions. The three projects that delivered interventions to address worklessness significantly influenced the employment status of their clients. Overall, work targeted at reducing offending was underdeveloped in the pilots and little can be concluded from the data provided.

1.3.3 System change

Most pilots were successful in effecting changes in the way in which local services were delivered to include the client group. This was achieved by fitting in with their partners’ objectives and strategy. By establishing effective partnership working, the pilots were able to encourage the local services to discharge their statutory responsibilities towards the clients, or to at least raise awareness of the needs of the client group. This was seen to be fundamental to clients accessing services and local agencies providing inclusive services.
1.3.4 Cost effectiveness

The costs of the interventions were low given the range and entrenchment of clients’ needs. In addressing those entrenched needs the pilots were successful in accessing services that were beneficial for their clients: health services, accommodation and benefits. The improved health and accommodation were certainly good for the clients and the benefits were often used to stabilise clients, for example by supporting them in accommodation. It is in this context that the cost effectiveness figures should be read. Overall, the pilots were successful in reducing health costs, but these were outweighed by a short-term investment in accommodation and benefits. In all of the pilots, the monthly costs exceeded the total cash savings, and the net cost per client per month ranged between £1,940 and just over £243. However, the conditions of the client group were likely to deteriorate further without support and the true alternative to Adults facing Chronic Exclusion is higher costs of inappropriate service use. Unfortunately this difference cannot be quantified. There is a strong argument that the short-term investment evidence could result in substantially longer-term savings.

1.4 Main findings and implications

The main findings of this report are:

1) The client group comprised some of the most chaotic or isolated individuals in a local community, who were hard to reach and difficult to engage. The success of the programme should be interpreted in this light.

2) The work of the pilots was not expensive. Most of the expense was attributable to members of staff working one-to-one with clients or in group work.

3) The pilot workers often worked as consistent, trusted adults. They worked effectively with the most chaotic and isolated adults to help them navigate the local services and move between transition points in their lives. The pilots were effective in bringing about better outcomes for the individuals, particularly in terms of health.

4) The consistency of the pilot workers was beneficial to persuading local services to engage with the client group, even in circumstances where clients had been previously denied or not engaged. The pilots were effective at bringing about changes in local service delivery by ensuring that services were open to all.

5) Although the work of the pilots saw an increase in expenditure on these adults, expenditure was on beneficial services that were good for the clients – health and accommodation – or those that helped to stabilise the client, such as benefits.

6) It is reasonable to assume that the effectiveness of the pilots will become more obvious as they work with clients over a longer period of time.
These findings demonstrate implications for the pilots, local commissioners and policy makers (see change below) in central and local government. The implications for each are described below.

Pilots need to ensure that their services fit with local priorities and commissioning strategy and that they demonstrate the value of the consistent, trusted adult.

Local commissioners need to recognise that Adults facing Chronic Exclusion clients are entitled to services and benefits and that by allowing these clients to work with consistent, trusted adults, their staff are better supported to provide the service to this difficult group and allow them to access services appropriately.

For policy makers, while there is little evidence that costs are shifting from centrally-funded emergency services to locally-funded health services, it is apparent that these services are being used more appropriately. The Adults facing Chronic Exclusion programmes have demonstrated the value of the consistent, trusted adult that can be applied to move individuals to employment and improved accommodation.
2. **Background and approach**

This report presents the findings from a three-year evaluation of the Adults facing Chronic Exclusion programme. It examines the nature of entrenched deprivation and the cost effectiveness of approaches designed to tackle the problem. This chapter introduces the programme and the pilots and describes the evaluation approach.

2.1 **Background**

Action to deal with adults facing social exclusion was set out in the Social Exclusion Task Force report, *Reaching Out: An Action Plan on Social Exclusion* (2006). Referring to the “2.5 per cent of every generation who seem caught in a lifetime of disadvantage and harm”, the report considered social exclusion as a phenomenon existing throughout an individual’s lifetime, and identified action to be taken in respect of the early years of life, childhood and the teenage years, as well as adulthood.

The report observed that socially-excluded adults can be in contact with multiple agencies and cost the public purse “tens of thousands of pounds every year”. The recent *State of the nation report: poverty, worklessness and welfare dependency in the UK* (2010) estimated that families with multiple disadvantages1 “cost public services between £55,000 and £115,000 per year as a result of [their] use of multiple services”. In addition, it is difficult to work with this group of adults as each faces multiple needs and has chaotic behaviour.

The *Reaching Out* report promised the launch of pilots to test the effectiveness of alternative approaches to improving outcomes with excluded adults, and reducing the cost to the public purse. As a result, the Adults facing Chronic Exclusion programme was established in 2007 as a cross-government collaboration with four sponsoring departments.2 It was led by the Task Force with a total budget of £6m over three years to fund 12 pilot projects across England. Eleven of the pilots have been delivered by voluntary sector organisations, while one has been delivered by a mental health trust.3 Each is described in Table 1 overleaf.

The report concluded that there was a need for public services to re-organise, better identify and meet the needs of adults facing chronic exclusion. Specifically, services need to work together in a cost-effective manner (say, providing primary health care via a GP rather than resorting to the use of hospital care), and supporting individuals as they move between services (for example, assisting the transition from benefits to work).

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1 Multiple disadvantages refer to individuals or families who experience low income, poor health or no qualifications.
2 The departments are: the Home Office, Department of Health, Department for Work and Pensions, Department for Communities and Local Government.
3 The New Directions Team at South West London and St George’s Mental Health NHS Trust.
<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>St Mungo’s Lifeworks project</strong></td>
<td>Works with homeless people in St Mungo’s hostels. The clients exhibit poor mental and physical health, which is treated through psychodynamic therapy, delivered one-to-one and through groups.</td>
</tr>
<tr>
<td><strong>The Employment Project – Thames Reach</strong></td>
<td>The project supports those seeking to move from unemployment into work. The clients are offered structured training and one-to-one mentoring to encourage skill development and to achieve their goals.</td>
</tr>
<tr>
<td><strong>HoST – Forensic Therapies</strong></td>
<td>The clients are female prisoners diagnosed with Borderline Personality-Disorder and are at risk of suicide or self-harm. The pilot delivers modified dialectical behavioural therapy and aims to reduce self-harm and suicide and improve relationships.</td>
</tr>
<tr>
<td><strong>NOAH Enterprise</strong></td>
<td>NOAH works with rough sleepers with a range of needs who are struggling to access services. Clients are offered practical and emotional support in accessing appropriate services and building relationships.</td>
</tr>
<tr>
<td><strong>Milton Keynes Link Worker Plus Scheme</strong></td>
<td>The clients are adults with a range of needs who are struggling to access mainstream services. Practical and emotional support in accessing appropriate services and building relationships is delivered.</td>
</tr>
<tr>
<td><strong>Cyrenians</strong></td>
<td>The pilot works with adults who are struggling to access mainstream services. These include rough sleepers, sex workers, prolific offenders and those with drug, drink and mental health problems. Uniquely, the pilot uses day and night outreach by peer workers. They provide practical and emotional support in accessing services and building relationships.</td>
</tr>
<tr>
<td><strong>Connected Care – Turning Point</strong></td>
<td>Targeted at those with complex needs. Encourages joined-up, bespoke services with a single point of entry and navigation through services.</td>
</tr>
<tr>
<td><strong>Fairbridge</strong></td>
<td>The pilot targets young people, aged 19–25, who are struggling to engage in suitable employment, training or education. Practical support is offered to help locate services, promote independence and increase confidence, with the goal of finding employment, training or education.</td>
</tr>
<tr>
<td><strong>Inside, Outside – After Adoption</strong></td>
<td>The pilot works with female prisoners who have lost their children to adoption or who are at risk of losing their children to adoption. One-to-one counselling or support is used to help women through the adoption process and after. Women are assisted to communicate with their children and ‘through the gate’ work in HMP Low Newton is provided to enable birth mothers to keep subsequent children.</td>
</tr>
<tr>
<td><strong>mcch Medway Pathways to Inclusion</strong></td>
<td>The pilot targets adults with Asperger syndrome, autism, learning difficulties or mental health needs. They are given one-to-one support to target specific needs. For example travel training with adults with autism and group activities to improve social skills and independence.</td>
</tr>
<tr>
<td><strong>New Directions Team – South West London Mental Health Trust</strong></td>
<td>The pilot defines its clients as adults leading ‘chaotic’ lifestyles. Emotional and practical support to build relationships and locate appropriate services is offered to clients. A steering group of statutory partners was set up to generate system change by promoting service ‘flexibility’.</td>
</tr>
<tr>
<td><strong>MAZE Project – Women Centre, Calderdale</strong></td>
<td>The pilot supports women suffering from domestic abuse or violence. It aims to enable women to make themselves safe, either through providing support or through work with couples to promote behaviour change.</td>
</tr>
</tbody>
</table>
Based on previous research evidence, the Adults facing Chronic Exclusion programme required the pilots to consider how they could work with individuals and services to:

- help clients to *navigate the system* by assisting them to access the services, such as health care and benefits, to which they are entitled
- support clients through *transition points* in their lives, for example, moving from hostel accommodation to a secure tenancy or finding employment; and
- effect local *system change* by strategic or operational changes in the delivery of local services to ensure they are universal.

The response of the 12 pilots to those three challenges was varied. Their client groups differed, and this was reflected in the services they provided and their outcomes. For example, some pilots focused on homelessness, while others principally addressed domestic violence, unemployment or the needs of young adults. In terms of services provided, some pilots adopted therapeutic approaches to address their clients’ circumstances – for example, Forensic Therapies – while others, such as mcch, provided mentoring and practical support.

### 2.2 Evaluation approach

The evaluation of the Adults facing Chronic Exclusion programme was designed to answer the question of whether “the Adults facing Chronic Exclusion pilots have succeeded or not in delivering their projected outcomes for service users and the services themselves, and have they been cost effective?” The evaluation looked at three key elements of the Adults facing Chronic Exclusion pilots: process, impact and cost effectiveness. The process evaluation used interviews to investigate what the pilots were doing, while the impact evaluation measured outcomes for clients across each of the pilots. The cost effectiveness study compared the cost of the pilots relative to their economic impact.

Each part of the evaluation was based on a thorough understanding of how each pilot was expected to achieve outcomes for their client groups and their individual approaches to service delivery. The evaluation was formative and considered how services for vulnerable people can learn from successful and innovative pilots. Details of each phase of the evaluation can be found in Appendix A.
3. **Context**

This section explores who the pilots’ clients were, what interventions were delivered and how the pilots worked with clients.

3.1 **Who are the Adults facing Chronic Exclusion clients?**

The client group lived chaotic or isolated lives and were hard to reach and difficult to engage. The chaos of their lives was marked by their rough sleeping, prostitution or drug and alcohol misuse and their isolation by a reluctance to venture out of their homes or engage with family, friends and neighbours because of domestic abuse, mental illness or personality disorders. Their chaotic and isolated lives either meant that they were reluctant or unable to engage with local services, or, indeed, that those local services were unable or unwilling to identify, engage and meet their needs. Their conditions were often long standing and seemingly intractable: in other words, chronic.

The Task Force defined chronic exclusion as adults who have “chaotic lives and multiple needs” encompassing poor mental health, substance misuse, poor social relationships, financial difficulties, lack of employability, and exclusion from services. All pilots report that they are dealing with clients who exhibit one or many of these conditions, frequently in combination (see Table 2).

**Table 2: Conditions exhibited by Adults facing Chronic Exclusion clients**

<table>
<thead>
<tr>
<th>Lifestyle conditions</th>
<th>Physical or Mental Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chaotic lifestyles</td>
<td>Learning disabilities</td>
</tr>
<tr>
<td>Drug/alcohol misuse</td>
<td>Mental illness</td>
</tr>
<tr>
<td>Homelessness/insecure housing</td>
<td>Poor physical health</td>
</tr>
<tr>
<td>Inappropriate use of services</td>
<td></td>
</tr>
<tr>
<td>Lack of employability/employment</td>
<td></td>
</tr>
<tr>
<td>Lack of engagement with services</td>
<td></td>
</tr>
<tr>
<td>Poor education/training</td>
<td></td>
</tr>
<tr>
<td>Offending or victimisation</td>
<td></td>
</tr>
<tr>
<td>Exploitative relationships</td>
<td></td>
</tr>
</tbody>
</table>
The pilots focused on different types of clients: for example, rough sleepers who prostituted themselves; women who, because of domestic violence, lived in isolation and street drinkers with mental health problems. However, despite these differences between individuals, it was apparent that overall the clients demonstrated:

- a risk to themselves (neglect, self-harm) or to others (crime, anti-social behaviour)
- a lack of resilience or the inability to bounce back from traumatic events or cope with life, due to illness, disability or lack of emotional development; and
- a lack of positive relationships in their personal lives or with local services, due to poor social skills or abusive and exploitative relationships.

In summary, the clients tended to lack relationships with other adults that were marked by a high degree of consistency (acting in a consistent manner) and trust (being trusted to act in the best interests of the client). As this report describes, the role of the consistent, trusted adult was often filled by the workers in the pilots themselves.

### 3.1.1 Client characteristics

The evaluation measured the clients' demographics and the use of services at the point of engagement and these are summarised below.

- **Gender**: there was a 55 per cent/45 per cent split of men and women. Most of the pilots had a majority of male clients, but two pilots were 100 per cent female and in a third, females comprised two-thirds (67 per cent) of the clients.

- **Age**: the average age of those on the programme was 35; the majority of clients were aged between 18 and 54.

- **Ethnicity**: the majority of clients in the Adults facing Chronic Exclusion programme were white. Only two pilots had a large percentage of non-white clients – 30 per cent and 53 per cent. Both of those pilots were located in London, reflecting the city’s ethnic diversity.

- **Accommodation**: clients in four pilots tended to be in stable accommodation when they started. In contrast, clients in another four pilots were a mix of those in stable and unstable housing situations.

- **Use of public services**: clients were generally light users of public services, which was consistent with the knowledge that this group were not engaged with services.

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4 The pilots explained that resilience was not an absolute concept and when resilience might appear weak, within the clients’ context these behaviours are crucial to coping.
5 492 male/408 female
6 One pilot works exclusively with young adults with a mean age of 20.
7 78 per cent, n=691
3.2 What the Adults facing Chronic Exclusion pilots did

The 12 pilots presented a variety of responses to the needs of adults facing chronic exclusion and this presented a challenge to describing and evaluating the programme. In exploring the similarities and differences among the pilots two particular aspects are described: the objectives targeted and the interventions used.

3.2.1 Objectives targeted by the pilots

The previous section described how the pilots supported clients through system navigation and transition points, and achieved system change. In describing this more fully below, some pilots worked to all three requirements, while others focused on particular elements for their clients.

System navigation
All pilots supported clients to build better relationships with statutory services, but adopted different approaches. Most assisted their clients to engage with services by acting as a broker, signposting services or accompanying clients to meetings. In contrast, a few focused on improving their clients’ own ability to engage with services, and provided minimal brokering or accompaniment.

mcch accompanied its clients to GP and other health appointments. The client group, who were on the autistic spectrum, found visiting services stressful and as a result fail to access the care and treatment that they need. The pilot supported them to use these services and increase positive outcomes. The ultimate goal was that the clients would develop the skills and confidence to manage these appointments on their own. The clients could then better manage their own healthcare while reducing the number of missed appointments. One member of the mcch staff described how “although we act as advocates for them, sometimes we just need to support them to be their own advocate”.

Transition points
Half of the pilots actively supported clients during the transition points in their lives. They either established interventions that targeted a specific transition point (for example, moving into employment, leaving an abusive relationship) or supported a client to make positive progress to overcome particular difficult circumstances in their lives.

System change
Only five of the pilots were identified at the outset of the evaluation as promoting system change, whether at an operational level (through raising awareness of their clients’ needs or introducing case management
approaches) or strategic level (by radically changing commissioning by involving local people in service design).

3.2.2 Interventions used by the pilots

In the response to the needs of the clients, the pilots formulated different approaches to achieving better system navigation, transition points and system change. A key influence on the approach taken was how the pilot understood the cause of their clients’ behaviour and how best to change it. In doing so, the pilots focused on their relationships with clients, relationships with public services or relationships with both clients and service.

Relationships with clients
Four of the pilots focused on clients with the expectation that the client would be better able to access local services. Of those pilots, two used a psychoanalytical intervention to encourage change in their clients, while another supported clients to access one or more of the interventions run by the charity. The fourth originally intended to work with both clients and services but finding the latter difficult focused instead on clients only.

Relationships with public services
One pilot – Link Worker Plus – focused more heavily on local services. This pilot saw statutory services as the experts and its role was to establish good relationships with the service provider whilst overcoming the barriers to access these services experienced by their clients. This was described by one worker who reported, “We don’t actually provide psychological intervention, we don’t provide drug treatment and we don’t provide housing. But we act as the jam in the sandwich to get those pieces to work together for that person.”

Relationships with both clients and services
In five of the pilots the workers developed relationships with both the clients and the local services they used. In those pilots the worker sought to understand not only clients’ needs and frustrations in accessing local services but also the difficulties in providing services to this group. In this type of pilot, the working practice was to act as a broker between clients and services, and to advocate on behalf of the former to the latter.

3.2.3 Project staff

Pilot staff came from a variety of backgrounds and experience, depending on the type of intervention that was being delivered. First, for some pilots, hiring staff with a substantial professional background was best for working with the Adults facing Chronic Exclusion client group. Given the complexity of the client group and public service delivery, it was observed that only persons with considerable experience could be expected to work effectively with the clients.

In contrast, other pilots did not draw their project workers from any particular professional discipline, but put greater emphasis on the skills of an individual worker. A third view was taken by Cyrenians who considered that the key
requirement of a support worker was to have recent experience of chronic social exclusion, including homelessness, substance misuse, and experience of the criminal justice process.

While individual projects placed different emphasis on skills and experience, the general requirements for working with the Adults facing Chronic Exclusion clients included:

- social skills (empathy, compassion and common sense); and
- professional skills (negotiating, flexibility and creativity).

These skills were complemented by an ability to empathise with the clients’ circumstances, while setting boundaries and empowering the client, together with working effectively with local services. This was effectively the consistent, trusted adult that was missing from the lives of the clients. In many cases, the pilot workers filled the role of the “consistent, trusted adult” and this was important to achieving results for the client.

3.2.4 Engagement and assessment

The first stage in working with clients was engagement and assessment. Pilot workers reported a flexible approach to engaging clients. This frequently took a period of weeks to months to complete while they considered whether an intervention would be effective. However, some pilots were not overly prescriptive and allowed clients to dip in and out of support as needed.

Following engagement, clients’ needs and risk factors were assessed. This was sometimes by rigorous assessment tools such as the ‘Chaos Index’ that operated in the New Directions Team South West London. This tool was devised in conjunction with local partners and validated by the local mental health NHS trust. Others deemed informal assessments to be more appropriate for their clients and emphasised the role of professional judgement. For example mcch guarded against the prescriptive criteria of statutory agencies, which they considered served to “assess to exclude rather than assess to include”.

3.2.5 Period of intervention

The pilots’ interventions ran over time periods ranging from six weeks – Forensic Therapies – to over one year – NOAH Enterprise. Milton Keynes Link Worker Plus Scheme ran a relatively short intervention, lasting less than three months in most cases. The other pilots provided support over periods of less than a year and more than three months. The length depended on the engagement of the client and his or her progress.

The duration of an intervention was prescribed by Forensic Therapies and St Mungo’s, both of which ran psychodynamic therapies. In other pilots, where timescales were less prescriptive, a pilot ran the risk of not assisting their clients to move on. Managers at both Cyrenians and The Employment Project Thames Reach were clear that holding on to clients was indicative of failure,
whereas NOAH Enterprise viewed its clients as requiring special attention for one year or more.

Some clients had conditions that could be remedied and were discharged quickly, while other clients had more intractable problems that needed greater support. The length of intervention clearly related to the time required to change the entrenched exclusion of the client group. It is noteworthy that the pilots that focused on relationships with clients and services tended to have a longer intervention period.

3.2.6 Working with clients

Given the circumstances of their clients, the pilot workers described their work as demanding and unpredictable and it required them to be committed, assertive and persistent. In working with their clients, the workers provided a variety of support: one-to-one meetings; group counselling sessions; accompanying them to and supporting them at appointments with local services; facilitating access to services; and supporting clients in their daily life. Often at the end of the intervention, the client would be referred to another (external) provider for support. This signified the end of the pilot worker’s support to the client.

3.2.7 Typology of pilots

This section has identified the similarities and differences between pilots, including how they related to the programme’s objectives, the relationship focus of their interventions and the length of the intervention. These differences are summarised in Table 3.
Table 3: Typology of pilots

<table>
<thead>
<tr>
<th>Pilot</th>
<th>Link to Adults facing Chronic Exclusion programme</th>
<th>Relationship focus</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>System navigation</td>
<td>Transition points</td>
<td>System change</td>
</tr>
<tr>
<td>Inside, Outside</td>
<td>● ● ● ● ●</td>
<td>● ● ● ● ●</td>
<td>● ● ● ● ●</td>
</tr>
<tr>
<td>St Mungo’s</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Forensic Therapies</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td>Fairbridge</td>
<td>●</td>
<td>●</td>
<td>●</td>
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<tr>
<td>Cyrenians</td>
<td>● ● ● ● ●</td>
<td>●</td>
<td>●</td>
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<tr>
<td>MAZE</td>
<td>● ● ● ● ●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>The Employment Project – Thames Reach</td>
<td>● ● ● ● ●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>New Directions Team</td>
<td>● ● ● ● ●</td>
<td>●</td>
<td>●</td>
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<tr>
<td>NOAH Enterprise</td>
<td>● ● ● ● ●</td>
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<td>mcch</td>
<td>● ● ● ● ●</td>
<td>●</td>
<td>●</td>
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<tr>
<td>Milton Keynes Link Worker Plus</td>
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<td>●</td>
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</table>
4. Results

This section reports the pilots’ progress towards enabling better system navigation, helping clients to move between transition points and contributing to local system change. The results are presented as outcomes for individual clients (system navigation and transition points) and outcomes for local services (system change).

4.1 Outcomes for individuals

Based on the outcomes for the Adults facing Chronic Exclusion programme and the individual pilots’ objectives, the evaluation measured the following outcome measures for each pilot:

- accommodation status
- employment status
- use of health services
- receipt of benefits
- offending and victimisation; and
- subjective health and well-being.

The sequence in which those individual outcomes were targeted varied by pilot, depending upon the clients’ circumstances and the pilot’s specified interventions and outcomes. Generally, the sequence reflected the need to stabilise the client (e.g. address mental health, drug and alcohol concern) prior to finding them secure housing or preventing eviction. Once they had stabilised the client, the pilots were able to make progress on other outcome measures, including accessing health services and welfare benefits (and additionally addressing – where relevant – other needs, such as domestic abuse). The pilots maintained that only once the client was stabilised could they start addressing the client’s employment status. It should, however, be noted that different pilots engaged at different stages of the sequence. For example Cyrenians worked predominantly at the earlier stages of stabilisation, finding hostel accommodation for rough sleepers. By comparison, The Employment Project Thames Reach clients were already stabilised when they entered the pilot at the pre-employment stage.

Table 4 below summarises the outcomes pilots were seeking to achieve for individuals (in other words, system navigation, transition points, and subjective improvements to health and well-being) together with indicators of those outcomes (for example, use of health services, offending, etc). All pilots aimed to improve their clients’ well-being during the course of the intervention, either as a result of practical support or therapy. All but two pilots aimed to improve system navigation; the exceptions were based in the prison pilots.
where system navigation was redundant. Only seven pilots targeted changes in transition points but data were available for another two pilots.

### Table 4: Outcomes evidence available for each pilot

<table>
<thead>
<tr>
<th>Pilot</th>
<th>System navigation</th>
<th>Transition points</th>
<th>Subjective</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Use of health services</td>
<td>Benefits receipts</td>
<td>Accommodation</td>
</tr>
<tr>
<td>Inside, Outside</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>St Mungos</td>
<td>●</td>
<td>●</td>
<td>-</td>
</tr>
<tr>
<td>Forensic Therapies</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fairbridge</td>
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</tr>
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<td>Cyrenians</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>MAZE</td>
<td>●</td>
<td>●</td>
<td>-</td>
</tr>
<tr>
<td>The Employment Project – Thames Reach</td>
<td>●</td>
<td>●</td>
<td>-</td>
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<tr>
<td>New Directions Team</td>
<td>●</td>
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<tr>
<td>NOAH Enterprise</td>
<td>●</td>
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<tr>
<td>mch</td>
<td>●</td>
<td>●</td>
<td>-</td>
</tr>
<tr>
<td>Milton Keynes Link Worker Plus</td>
<td>●</td>
<td>●</td>
<td>-</td>
</tr>
</tbody>
</table>

- Data not available

○ Data available but the pilot does not target this outcome

● Data available and the pilot does target this outcome

#### 4.1.1 System navigation

In measuring system navigation, two outcomes were used: use of health services and receipt of benefits.

**Use of health services**

Across the Adults facing Chronic Exclusion programme, the average cost to the health service of each client was £216 per month before the programme (n=376). This increased to £245 three months later (n=295) and then reduced to £178 after six months (n=205). The cost of health service figures for each pilot are set out in Figure 1 below.
Examination of the overall reduction in the cost of health services reveals that it is accounted by four changes:

1) After three months there was an overall decrease in accident and emergency (A&E) attendances across all pilots. This was particularly pronounced at four pilots – Link Worker Plus, NOAH Enterprise, New Directions Team South West London, and St Mungo’s.

2) There was also a decrease in ambulance journeys at those four pilots.

3) Those four pilots – plus two other pilots (mcch and The Employment Project Thames Reach) – experienced a decrease in visits to GPs.

4) There was an increase in outpatient appointments after three months, especially at Link Worker Plus, New Directions Team South West London, St Mungo’s and The Employment Project Thames Reach.

In the four weeks prior to engagement with a pilot, GP services were the most used service, and there was limited use of A&E and outpatient appointments. However, overall the clients were not prolific users of services, so a small number of clients could account for the changes seen in each pilot. As a consequence, although the overall change in use of health services meant less expense to the public purse, only mcch was found to have a significant influence on reduced health costs that was accounted for by a decrease in visits to the GP. That said, the evidence also suggests that the clients are using health services more appropriately by transferring from secondary care services to primary care. In other words, within three months clients were

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8 Only one project reported the use of fire services at the time of engagement with the pilots.

9 mcch had a significant influence (p<0.05).
using fewer emergency services and accessing outpatient appointments instead, with the result of lower costs after six months.

This shift to primary care was managed by the pilots. They described how they encouraged clients to access health services by accompanying them to appointments at the GP surgery or outpatient clinics. Indeed, the pilots that reported better outcomes tended to be those that focused on relationships with services or clients and services, namely, Link Worker Plus, New Directions Team South West London, mcch and The Employment Project Thames Reach.

The Cyrenians now uses its Adults facing Chronic Exclusion approach to working with individuals who have repeat alcohol-related hospital admissions in Newcastle and North Tyneside. Proactive outreach will engage vulnerable clients with alcohol or substance misuse problems. The workers will identify underlying needs and ensure the clients use non-emergency health services. They will also develop and maintain good links with key services to improve client access. Locally this is considered to have reduced emergency admissions within the client group during the first year.

The clients’ subjective assessment of their health was also measured. Minor improvements in health scores were seen at most of the pilots after three and six months. The largest change in the health score was after three months at Forensic Therapies, where there was an average increase of 20 per cent. However, previous research shows that prisoners’ health can improve within the first few months of a sentence, so it is unlikely that this change was attributable to the pilot (Plugge et al, 2006). In addition to increases in the clients’ assessments of their health, the pilots were also found to significantly influence overall well-being. The mean influence across the Adults facing Chronic Exclusion programme was an increase of 30 per cent. These increases – particularly in the well-being scores – should be read in light of the chaotic circumstances of the clients and their entrenched needs, and is good news for the programme.

**Receipt of benefits**

Across the Adults facing Chronic Exclusion programme the income clients derived from benefits increased as clients accessed the benefits to which they were entitled. Before the programme, clients received on average £415 from benefits per month, after three months they received £464 and after six months they received £473. The increase in receipt of benefits is statistically significant at all of the pilots except Cyrenians and St Mungo’s. See Figure 2 for a breakdown by pilot.

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10 The Eq-5d health score was used to measure the client’s health assessment.
11 This was statistically significant at the level of p<0.05.
12 This was statistically significant at the level of p<0.05
The biggest changes were in receipt of Income Support and accommodation-related benefits, namely, Council Tax Allowance and Housing Benefit. The former benefit provides extra money to those who are on a low income and were not claiming benefit, while the latter supports individuals in accommodation and tenancies. The importance of this financial support should not be underestimated given the typical Adults facing Chronic Exclusion client’s circumstances and their need to be stabilised. After six months, Income Support increased at six of the pilots, housing benefit at five pilots and Council Tax Allowance at eight.

It should be noted that of the pilots that increased receipts, most were those that developed relationships with either services or both clients and services. These were MAZE Calderdale, Link Worker Plus, Cyrenians, NOAH Enterprise, New Directions Team South West London and The Employment Project Thames Reach. Those pilots took time to help clients access the benefits to which they were entitled, for example, at Cyrenians, if a client had been banned from the JobCentre, the workers would work with both the client and the centre to ensure that the former could gain access to the centre’s services. Similarly, a link worker would take the client to the JobCentre and advocate on his or her behalf.

The Thames Reach project works with clients to use the benefits systems to encourage working. The project aims to ensure that the client is not adversely affected by a perceived reduction in out-of-work benefits, which might prevent him or her choosing to take a job. The pilot does this by making a distinction between ‘in-work’ and ‘out-of-work’ benefits. As people progress from worklessness into employment their benefit claiming will change from ‘out-of-work’ benefits, such as job seeker’s allowance, to ‘in-work’ benefits, such as Housing Benefit. This helps to support the client through the transition.
4.1.2 Transition points

The success of a pilot in supporting clients with transition points was measured by changes in an individual’s accommodation status, employment status and offending behaviour.\textsuperscript{13}

Accommodation

After three and six months, the accommodation status improved for clients at NOAH Enterprise and Cyrenians, largely because workers were quickly able to secure access to a hostel or accommodation for homeless clients soon after engagement. At the remaining pilots, accommodation status remained stable between three and six months. Of those pilots, clients of mcch, Link Worker Plus, Fairbridge, The Employment Project Thames Reach and the MAZE Project Calderdale tended to be living in good accommodation at the point they engaged with the pilots, whereas clients of the New Directions Team South West London and St Mungo’s were stabilised in temporary accommodation. Stabilising a client in accommodation was not only an important goal in itself, but, overall, the pilots maintained that a stable accommodation assisted clients to access better health services.

The evaluation also found that satisfaction with accommodation can increase even though their accommodation status remains unchanged, or is reversed (for example, by a move from private accommodation to a hostel). In those cases, a hostel might provide a more secure environment for a client, particularly if the hostel supported residents with substance misuse or mental health problems. For example, at NOAH, a worker described how moving from a council house to a hostel was better for a client because the hostel provided a better environment in which to deal with the client’s needs.

\begin{quote}
NOAH identified that while clients were still sleeping rough their lives were too chaotic to allow significant progress to be made. As a result getting their client group into secure accommodation was a priority. This was difficult given the lack of suitable emergency or supported accommodation and the reluctance of landlords to accept clients as tenants. To overcome these challenges NOAH built up relationships with private landlords and the pilot’s funding was used to pay the rent deposit. The client repaid this money on a nominal basis and the NOAH worker supported the individual to maintain the tenancy. Ensuring this stability gave NOAH a platform to work on the client’s other problems.
\end{quote}

Employment

In light of the typical characteristics of an Adults Facing Chronic Exclusion client, assisting the move from worklessness to employment represented a big challenge for the pilots. While only one of the pilots – The Employment Project Thames Reach – specifically sought to assist with this transition and targeted clients who were seeking work, the other pilots reported a range of practical activities to help their clients become ready for work although this was not specifically targeted.

\textsuperscript{13} Analysis is presented on the 7 pilots that delivered work on transition points.
Overall, a quarter of the projects – The Employment Project Thames Reach, mcch and Link Worker Plus – were found to influence their clients’ employment status. This included finding voluntary work, which was seen as a precursor to paid employment. At both Link Worker Plus and mcch, improvements were due to clients becoming volunteers and it was explained that such work was a large step forward for their clients. For example, the mcch clients are on the autistic spectrum and the pilot considered that full employment might be an unrealistic goal for some in this group. At The Employment Project Thames Reach, 19 per cent of 73 clients moved from unemployment to employment within nine months and 4 per cent entered training or voluntary work within nine months.

Some of the Link Worker Plus client group required ongoing support to maintain and then further their progress. Peer support and gradual steps towards accessing education or entering employment were identified as key means of building such resilience. The volunteer coordinator worked with these clients to overcome setbacks such as alcohol relapses, develop their social skills through group activities and access education, training and volunteering opportunities with a view to entering the labour market. This was helped by the coordinator’s relationships with local education providers and engagement with a local volunteering forum.

The remaining pilots were unable to demonstrate changes in employment status in the six-month period or less covered by the data. They maintained that it was unlikely that their clients could start to address worklessness until eight or more months have passed.

While improvements in employment status were modest, clients across the pilots reported to being more satisfied with their work situation.

4.2 Outcomes for local areas

The pilots were asked to consider how they could enable local system change, in other words, influence how local services are run and delivered to better serve the Adults facing Chronic Exclusion client group. First, the evaluation investigated what enabled the pilots to be mainstreamed before it considered what wider system changes were made.

4.2.1 Mainstreaming services

Towards the conclusion of the Adults facing Chronic Exclusion programme, the pilots looked to sustain their service provision by securing mainstream funding. In doing so, they considered the requirements of their statutory partners and the impact of changing economic circumstances. This section examines why some pilots have made greater progress towards mainstreaming than others.

14 This was statistically significant at the level of p<0.05
At the close of the evaluation, five of the pilots had secured continuation funding. The first pilot to secure continuation funding was Cyrenians, which secured funding from the Public Health Team in the NHS and Newcastle City Council and is now integrated into the local response to chronic exclusion. Other pilots have strong local support and have gained, or are likely to gain, part funding to continue for at least one more year. Some pilots have more uncertain mainstreaming prospects, despite the good reports from local partners of their work. One pilot is unlikely to receive mainstream funding once the Adults facing Chronic Exclusion programme ends and has begun to wind down its services.

The challenges to securing funding were identified by pilots and local partners. The main challenge was the economic climate and the prospect of further cuts to local budgets. This included the possibility that local services would not commission a pilot’s intervention at a time when their own services were being cut, or else would only provide partial funding that would dilute the service offered. Given that the pilots tended to work with individuals that local services did not, this was a reasonable concern. However, behind this lay some disquiet that in mainstreaming, local commissioners would seek to align a pilot’s activities more towards the local strategy and away from the pilot’s own objectives.

Although these concerns were genuinely felt, the purpose of the Adults facing Chronic Exclusion programme, however, was to fund and test new approaches and much has been learned about these, including their cost effectiveness. In light of local fiscal constraints, pilots that could demonstrate the cost effectiveness of their work ought to have been better placed to secure continuation funding. Indeed, a number of pilots stressed the importance of producing evidence on client outcomes and cost savings for statutory services in order to secure funding both now and in the next financial year. In the words of one manager:

“I think inevitably across a whole range of service areas there is going to be much more significant challenge about the approach, the value, the additionalities and the outcomes…” (NOAH).

At the end of the funding it was also reasonable to expect the pilots to fit key local priorities. This required pilots to be versatile and fit with available opportunities. Demonstrating such benefit should help to persuade local commissioners that funding Adults facing Chronic Exclusion type interventions will be of benefit to them, even though they are not bound to fund such interventions. In doing so, local commissioners will have to be persuaded of the benefits of the pilots and their interventions. For example, in securing their future funding it was crucial for Cyrenians to demonstrate that their work contributed to the delivery of the local alcohol strategy. They succeeded in that and the pilot is now funded to form the outreach arm of a multi-agency alcohol team.
4.2.2 System change

To effect system change, some of the pilots sought to ensure that services were universal and able to meet the needs of the client group. This was to be achieved by strategic changes in how services were commissioned and also operational changes to the way in which local services were delivered. How system change was effected via “strategic” and “operational” changes is discussed below. Before doing so, however, it should be noted that there were limits to the pilots’ ability to effect system change: statutory services are bureaucratic, can be slow to change, have their own rules of procurement and need to meet their own performance measures and targets. Often, they were reluctant to engage with either the pilots or their clients and the pilots recognised that they had little influence to effect change. Despite those restrictions, the discussion below indicates that some pilots were able to bring about effective system change, albeit in some cases to a modest extent.

Strategic change

Connected Care was the only pilot that set out to effect strategic change through a radical change to commissioning of health and social services in Bolton and to reconfigure services in a more effective manner\(^\text{15}\). A number of steps were taken by the pilot including: the recruitment and training of community researchers,\(^\text{16}\) who gathered data on the state of service provision; the analysis of this data and the preparation of a service specification, with appropriate changes to models of service delivery; the presentation of the specification to a steering group of partners from the council-run services and the NHS; and the provision of support to the implementation of appropriate changes to services. While it did not deliver services to individual clients for the first two years, the Connected Care pilot was the impetus to establishing an online directory of services and a “social enterprise” that provides a single point-of-entry to the range of services offered locally and helps individuals to access them.

A notable feature of the Connected Care pilot was its steering group, which included representatives of council services, the Primary Care Trust and community researchers. The latter’s role was recognised as providing a reality check to service managers, and a “legitimate and constructive challenge to what [statutory services] were trying to do”. It was considered that representation from the Primary Care Trust and additional representatives from the criminal-justice sector would have been beneficial.

Operational change

Other than Connected Care, the pilots carried insufficient weight to change local systems and recognised that this was the responsibility of local commissioners. However, most of the pilots were able to achieve modest system change at an operational level by raising awareness of their clients’ needs and making services more inclusive to individuals. Change at this level

\(^{15}\) It was outside the scope of the Adults facing Chronic Exclusion evaluation to measure the effectiveness of this reconfiguration.

\(^{16}\) Community researchers were not professional researchers, but local people who were able to engage with the most socially-excluded members of the community and gain their views on service provision.
occurred through establishing a trilateral relationship between the pilot, local services and the clients which:

- Met their partners’ requirements: pilots reported that good relationships with local partners were accompanied by understanding their partners’ objectives and fitting in with that strategy.
- Established effective partnership working: the pilots reported that they gained their partners’ trust and access to services when they were seen as being professional and making appropriate referrals.
- Allocated responsibility: through working together to meet local requirements and establish partnerships, pilots were able – at best – to encourage the local services to discharge their statutory responsibilities towards the clients, or to a lesser extent raise awareness of the needs of the client group. This was seen to be fundamental to clients accessing services and local agencies ensuring that these services were inclusive.

Several of the New Directions Team client group suffered from both mental health problems and drug addiction. Such dual diagnosis meant the mental health service and Drug and Alcohol Team were reluctant to take primary responsibility for clients and so they could miss out on vital services. The pilot engaged workers at both services to explain how the pilot could support them. Drawing upon their own expertise and experience, the link workers discussed approaches to managing dual diagnosis, which could ensure that these services were inclusive of the client group.
5. **Cost effectiveness**

This section details how the pilots spent their money and the cost effectiveness of the pilots. As a preliminary to understanding cost effectiveness, consideration is given to the economic impacts of the pilots on key outcomes and the value of the health impacts on the clients.

5.1 **What did the pilots spend their money on?**

The annual cost of the pilots in 2009-10 ranged substantially, with the most expensive pilot (£260,000 – St Mungo’s) being more than twice the cost of the cheapest pilot (£107,000 – Inside, Outside). Closer investigation of those costs found that the money spent on clients actively engaged on interventions ranged even more widely: Fairbridge spent as much as £1,500 per client, 10 times that of the pilot that spent the least on its clients (£150 – The Employment Project Thames Reach). These wide ranges are not surprising given the diversity of the pilots in the programme and can be accounted by the cost of operational and administrative staff employed to deliver the interventions, and the interventions themselves. These costs are explored more fully below.

5.1.1 **Staff costs**

The principal cost was the administrative and operational staff employed by the pilots. However, the average staff wage of the pilots depended on the type of interventions offered and the level of skills and training of the staff required to deliver the service. As would be expected, those pilots that employed higher professional skills had higher staff costs than pilots that did not require formally-qualified staff. This was reflected in the remuneration rates across the programme and the hourly staff costs for individual pilots are set out in Table 5 below.

**Table 5: Hourly staff costs**

<table>
<thead>
<tr>
<th>Pilot</th>
<th>Avg. Hourly Cost of Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tyneside Cyrenians</td>
<td>£ 10.03</td>
</tr>
<tr>
<td>mcch Pathways</td>
<td>£ 10.35</td>
</tr>
<tr>
<td>Fairbridge</td>
<td>£ 11.55</td>
</tr>
<tr>
<td>Link Worker Plus MK</td>
<td>£ 13.73</td>
</tr>
<tr>
<td>NOAH Enterprise</td>
<td>£ 15.08</td>
</tr>
<tr>
<td>Calderdale MAZE Project</td>
<td>£ 16.88</td>
</tr>
<tr>
<td>Forensic Therapies</td>
<td>£ 16.92</td>
</tr>
<tr>
<td>Inside, Outside</td>
<td>£ 17.30</td>
</tr>
<tr>
<td>St Mungo's</td>
<td>£ 19.91</td>
</tr>
<tr>
<td>The Employment Project Thames Reach</td>
<td>£ 22.70</td>
</tr>
<tr>
<td>New Directions Team South West London</td>
<td>£ 24.18</td>
</tr>
</tbody>
</table>
To put these average hourly costs for each pilot into context, data provided by the Personal Social Services Research Unit shows that an adult social worker costs £29 per hour and a social work assistant costs £20 per hour. These costs are not wholly comparable as the Personal Social Services Research Unit data is for a type of worker and it is known that the workers in Table 5 come from a variety of backgrounds. While the Personal Social Services Research Unit data provides a higher hourly cost for client contact time, many pilots are providing their service at less cost.

5.1.2 Cost of services

The pilots’ staff provided a variety of services to their clients – including providing personal budgets, residential courses, access to services and accompanying clients to appointments. Although the costs of providing these services were measured, they were not universally delivered. However, analysis of the data revealed that the most important services were one-to-one meetings and the group discussions. These services were reliant on staff time and ranged from 100 per cent of a pilot’s cost to 25 per cent.

The evaluation also measured the level of input given to individual clients and the type of interventions that were undertaken. By assessing the costs of the interventions an attempt was made to compare the value of the direct client input with the total spending of the pilots. However, the results of this analysis were inconclusive as the estimated direct client input accounted for a very small part of the overall spending (2–20 per cent) and is probably due to under-reporting of client activities in the pilots.

5.2 Cost effectiveness

In light of the multiple problems of the client group, it should be noted that the cost of the interventions was not high, particularly in the context of delivering services to a chaotic and isolated client group that was, by definition, excluded from mainstream services. However, any judgement of the success of the pilots has to take into account their cost effectiveness. Two measures of cost effectiveness are calculated below: the straightforward cash savings and the cash saving plus the health impact. The former simply assesses the “treasury impact” of the pilots. The latter accounts for the value of the benefits of the health impacts on the client and reflects the pilots’ work in ensuring that their clients are included in mainstream services. Before turning to those calculations, the cash savings – or economic impact – and the health impacts are provided below.

5.2.1 The economic impact of the pilots

The economic impact of the pilots was measured by the cash savings made through changes in outcomes for individual clients relating to service use, namely the cost of:
In addition to these cash savings and expenditure, the evaluation valued the health impacts of the pilots using the Quality-Adjusted Life Years method. This assesses the average gain or loss in health state that the clients of the pilots experienced subsequent to joining the pilots. The gains in health state were valued at £30,000 for a whole year. Together, the cash savings and the Quality-Adjusted Life Years provide the economic impact of the pilots.

The economic impacts are summarised in Table 6, which describes the cash savings (or spending) that are made by statutory agencies relating to the clients’ changes to health, child care, accommodation and benefits. It also provides the health score by each pilot that was derived from the Quality-Adjusted Life Years method. The “total” columns provide measures of the total cash savings and the economic impact. The former is the sum of all the cash savings and the latter is the total cash savings as adjusted by the health impact. Positive results indicate cash savings or a benefit, and negative results indicate an increase in costs.

Across all the pilots the programme had a negative economic impact of £110. This comprises an overall cash cost (rather than saving) of £186 per month per client arising from changes in outcomes for individual clients, and a positive health impact of £77 overall. This means that overall public spending increased by £186 per client per month, which is only partly offset by the health benefit of £77 per client per month. However, when considering this negative impact, allowance should be made for the clients’ typical circumstances when they first engage with the pilots and the inevitable cost to securing the health, housing and benefit outcomes. These outcomes relate to services that the clients required, and to which they were entitled within a universal health service and welfare system.

Looking at individual pilots more closely, only two of the pilots (excluding the two prison-based pilots) show a positive economic impact of greater than £100, namely, mcch and Link Worker Plus. In these two pilots there was a better use of health services and the health impacts were high. In accounting for this, both pilots developed relationships with health services to ensure referrals were appropriate or the service was aware of better ways of working with the client group. It is notable that these beneficial impacts were obtained at negligible cost to the health services.

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17 The Quality-Adjusted Life Years method calculates the value of an individual’s health state.
18 As referenced in the previous section, some of the impacts on the health will be due to the better health care in prisons.
Table 6: Economic impacts of the pilots after six months

Positive results indicate a cost saving or benefit. Negative results indicate greater expenditure or a cost. The prison pilots are in italics.

<table>
<thead>
<tr>
<th>Pilot</th>
<th>Cash savings</th>
<th>Health state</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Health services</td>
<td>Children in care</td>
<td>Accommodation</td>
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<tr>
<td>Calderdale MAZE Project</td>
<td>-£37</td>
<td>-£37</td>
<td>£51</td>
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<td>Forensic Therapies</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Inside, Outside</td>
<td>N/A</td>
<td>£23</td>
<td>N/A</td>
</tr>
<tr>
<td>Link Worker Plus MK</td>
<td>£149</td>
<td>-£5</td>
<td>-£82</td>
</tr>
<tr>
<td>mch Pathways</td>
<td>-£128</td>
<td>-£37</td>
<td>-£110</td>
</tr>
<tr>
<td>New Directions Team South West London</td>
<td>-£28</td>
<td>-£8</td>
<td>-£156</td>
</tr>
<tr>
<td>St Mungo’s</td>
<td>-£12</td>
<td>-£4</td>
<td>-£53</td>
</tr>
<tr>
<td>The Employment Project Thames Reach</td>
<td>-£12</td>
<td>-£3</td>
<td>-£17</td>
</tr>
<tr>
<td>Cyrenians</td>
<td>£71</td>
<td>£1</td>
<td>-£641</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>£19</strong></td>
<td><strong>£7</strong></td>
<td>-£154</td>
</tr>
<tr>
<td><strong>Total exc. prison pilots</strong></td>
<td><strong>£19</strong></td>
<td><strong>£6</strong></td>
<td>-£154</td>
</tr>
</tbody>
</table>

In contrast, NOAH Enterprise, the New Directions Team South West London, Cyrenians, The Employment Project Thames Reach, MAZE Calderdale and Fairbridge showed negative economic impacts of more than £100 per client per month. These are accounted by increased costs relating to the accommodation impacts (NOAH Enterprise, New Directions Team South West London, St Mungo’s, The Employment Project Thames Reach and Cyrenians); increased receipt of benefits (all except St Mungo’s) and increased use of health service (all except St Mungo’s and Cyrenians). Again, these costs reflect the individual objectives of the pilots – for example, a cash cost relating to improved accommodation should be expected at Cyrenians who aim to accommodate rough sleepers – and should be considered as an economic good.

In economic terms this means that only the monetary value of the costs of additional services in accommodation or in child care is shown, but not their benefits. The value of this argument can be seen by comparing the additional health costs and the health benefits; in the majority of pilots the sum of additional health costs and health benefits is positive. This means that the intervention does not cause more costs than could be justified by the positive health benefits. Even without the prison pilots the health benefits (£40) and the additional health costs are positive. Unfortunately there is no equally
accepted methodology to value the benefits of accommodation changes and, therefore, the costs and benefits under this most important heading cannot be estimated.

To understand the great variability of the economic impacts of the pilots, further consideration is given to the cost savings of individual outcomes that are presented in the Table 6.

**Health**

Overall, the pilots achieved cost savings to the health service of £19 while the overall value to the health of the clients was £77 per month. Set against that, the best-performing pilot on this score was Link Worker Plus, which achieved cost savings to health services of £149 per client per month and improved health in its clients valued at £198 per client per month. The other pilots to reduce costs to health services were mcch (£17 per client per month) and Cyrenians (£71 per client per month). The common thread in these three services is that they aim to develop good relationships with health services so they provide better services to the client group. In particular, the pilot workers at Link Worker Plus signposted their clients to appropriate health services and sought to prevent inappropriate referrals, particularly to the local mental health service.

In contrast, The Employment Project Thames Reach, MAZE Calderdale and the New Directions Team South West London averaged small increases in costs to health services of less than £100. However, in these pilots use of services was changing in the direction expected by the evaluation, namely the greater use of non-emergency services. Although this seems to have resulted in greater costs in the short time period covered by the analysis, it is a matter of reasonable speculation that over subsequent months health service use by those clients would decrease and cash savings would be achieved (see below).

Where pilots did not actively target use of health services, it was unlikely that cost savings would be achieved in health. This was the case with Fairbridge, which showed the largest increases in costs to health services after six months (£163).

**Accommodation**

Overall, the cost of accommodation rose across all the pilots and was valued on average at £154, but this reflects the high costs of accommodation that relates to this outcome. Further, *there is an assumption a person sleeping rough is a nil cost to the public purse, but in reality lack of accommodation might bring greater health and crime costs to society.*

Looking at the pilots individually, accommodation costs were over £100 in three of the pilots after six months: Cyrenians (£641), NOAH Enterprise (£110) and the New Directions Team South West London (£156). Not surprisingly, each of those pilots works with clients who are homeless – especially the first two – so the increases in accommodation costs reflect the

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19 These costs were not included in the economic impact analysis.
success of those pilots in achieving this outcome. It is noteworthy that NOAH’s accommodation costs are a sixth of Cyrenians, despite the two pilots serving a similar type of client. The explanation for this is that NOAH housed its clients in private accommodation because the town where it is located lacks hostels and refuges. The pilot’s use of private accommodation increased receipts of housing benefit, which is included in the cost of the benefits below. In contrast Cyrenians use hostels and other temporary accommodation in Newcastle and considered that maintaining their clients in private accommodation took considerable effort.

**Receipt of benefits**

The previous two outcomes might well be considered to be economically desirable in themselves and it would be considered good that individuals are appropriately accommodated in hostels or tenancies (and not causing crime, fear of crime and anti-social behaviour) and are maintaining a good level of personal health (and not accessing emergency services or clinics inappropriately). Furthermore, it is a matter of reasonable speculation that once accommodated in appropriate accommodation it will be easier for an individual to maintain good health. In many cases the use of benefits was to help stabilise clients in, for example, accommodation or to provide them with a legitimate source of income to which they were entitled.

In many cases, clients were claiming benefits that they had not received previously as a result of the pilots’ work. Given the circumstances of the typical client, it is not surprising that the cost of benefits increased in all but one pilot – St Mungo’s – and the overall average increase across the programme was £58 per client. Looking at individual pilots, the largest increase was found in NOAH Enterprise (£145 per client per month); however Link Worker Plus (£100) and MAZE Calderdale (£114) also both increased benefit costs per client per month by £100 or more. The increases were related to increased claims on Housing Benefit and Council Tax Allowance (which are associated improved accommodation outcomes) and Income Support (which is typically available for lone parents, carers, and those who are not entitled to Jobseeker’s Allowance or Employment and Support Allowance).

The Employment Project Thames Reach was the only pilot that actively sought to move clients into employment (see below). For Thames Reach’s clients, the increase in benefits was due to non-employment related benefits such as Housing Benefit, Child Benefit and others. In fact, the Jobseeker’s Allowance decreased by £8 per month per client, although Incapacity Benefit and Income Support increased by £15 and £30 respectively.

**Children in care**

Overall, the cash savings relating to children in care were negligible: on average £7 across the programme. This is largely attributable to the work of Inside, Outside and is consistent with its work with female prisoners who have given their children up for adoption.
Crime costs
Only one of the pilots supplied data on the number of crimes committed. Feedback from pilots was that this question was either not asked (for fear it would alienate the client) or the clients would not answer it truthfully. The exception is Cyrenians, which supplied crime data. At the beginning of the pilot, Cyrenians’ clients offended on average twice in a month (n=33). This reduced to once a month at months three and six (n=33). However, it should be noted that none of the pilots undertook specific work to reduce reoffending. Rather, the pilots believed greater stability and access to services would result in reductions in offending and reoffending by the client group.

Cyrenians’ data suggests that the cost of crime was £4,597 per client at the start of the pilot. This decreased to £2,090 after three months and rose to £3,275 after six. This implies a cost saving of £1,322 after six months with the total cost savings on crime by clients of £715 per month per client. The reasons for this reduction are not clear although it is consistent with the achievements in improved accommodation and health services.

5.2.2 Cost effectiveness of the pilots
To be cost effective, the total cost savings or other economic benefits must exceed the pilots’ monthly costs. Table 7 provides details of the total spending per active client by pilot and two measures of cost effectiveness. The first measure simply provides the cash savings/cost, which is the difference between the total expenditure and cost savings. The second measure adds the health benefits to the cash savings. By including the health benefits, the latter measure takes account of the full value of the differences in clients’ health that have accrued from the work of the pilots. While the first measure provides the treasury impact of the pilots, the second takes into account the value of the work of improving health benefits and ensuring services are inclusive of the client group. The results of the cost effectiveness analyses, summarised in Table 7, shows that on either measure, no pilot (with the exception of Forensic Therapies) was cost effective.

20 The evaluation followed the British Crime Service method and limited the number of crimes a month to five so that prolific offenders do not skew the results.
Table 7: Cost effectiveness of the pilots after six months

*Prison based pilots in italics*

<table>
<thead>
<tr>
<th>Pilot</th>
<th>Spending</th>
<th>Cost Effectiveness 1</th>
<th>Cost Effectiveness 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calderdale MAZE Project</td>
<td>£676</td>
<td>£813</td>
<td>£813</td>
</tr>
<tr>
<td>Fairbridge</td>
<td>£1,516</td>
<td>£1,746</td>
<td>£1,940</td>
</tr>
<tr>
<td>Forensic Therapies</td>
<td>£260</td>
<td>£260</td>
<td>£118</td>
</tr>
<tr>
<td><em>Inside, Outside</em></td>
<td>£266</td>
<td>£243</td>
<td>£62</td>
</tr>
<tr>
<td>Link Worker Plus MK</td>
<td>£615</td>
<td>£654</td>
<td>£456</td>
</tr>
<tr>
<td>mcch Pathways</td>
<td>£1,511</td>
<td>£1,537</td>
<td>£1,401</td>
</tr>
<tr>
<td>NOAH Enterprise</td>
<td>£695</td>
<td>£1,116</td>
<td>£1,038</td>
</tr>
<tr>
<td>New Directions Team</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South West London</td>
<td>£883</td>
<td>£1,079</td>
<td>£1,148</td>
</tr>
<tr>
<td>St Mungo’s</td>
<td>£310</td>
<td>£352</td>
<td>£212</td>
</tr>
<tr>
<td>The Employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Thames Reach</td>
<td>£151</td>
<td>£268</td>
<td>£281</td>
</tr>
<tr>
<td>Cyrenians</td>
<td>£468</td>
<td>£1,075</td>
<td>£939</td>
</tr>
</tbody>
</table>

Looking at individual pilots, the table reveals that the total cash savings were greater than the total spending per active client (Cost Effectiveness 1). On this measure the net cost of the client ranges from £1,746 (Fairbridge) to £243 (Inside, Outside), and in five of the pilots the net cost exceeded £1,000 (Fairbridge, mcch Pathways, NOAH Enterprise, the New Directions Team South West London, the Cyrenians). However, it should be noted that the pilots worked more intensively with clients over the earlier months of an intervention, but it was expected that this support would be reduced over time and lead to a reduction in the monetary costs associated with the pilots. This is subject to the proviso that individuals whose lives were chaotic can be stabilised over the longer term (see section below).

The better measure of cost effectiveness includes the value of the health benefit (Cost Effectiveness 2). Under this measure, Forensic Therapies is the only pilot where the economic benefits are greater than the pilot's costs. However, as described earlier, the increases observed in prisoners’ health cannot be attributed to the two prison-based pilots. Therefore, the best performing pilot is St Mungo’s, which cost £212 per client per month.

The earlier results sections reported that the pilots had produced beneficial outcomes, such as better use of health services and greater numbers of clients receiving benefits. It should be noted that during the time period covered in the data (up to six months after engagement), accommodation costs and benefits costs were expected to increase. The results, however, raise the need for the evaluation to find a model of delivery that is more cost effective. The evidence so far points to focusing on those pilots that work with local services Three elements of design should be considered – the length of intervention, the cost of staff and the necessary case load.
5.2.3 Cost effectiveness in the longer term

The results set out above describe the short-term investment in the client group, namely, improved accommodation, increased benefit receipts, and the better use of non-emergency health services, and the analysis presented in Table 7 suggests that none of the pilots have been cost effective. However, two important caveats on this finding should be entered that permit a more positive understanding of the work of the pilots.

First, the analysis only compares input and impacts after six months. This limited period underestimates the total impact of the pilots as the impact over a longer term is likely to last longer than the inputs. While it is not possible to estimate how much longer this will be, it is quite clear that for most pilots the impacts only have to be twice or three times as long as the intervention time to make them cost effective. In other words, while these analyses were calculated for the period after six months, it is likely that some of the costs described will reduce over time. It is reasonable to assume that this will be true for both the costs associated with delivering the pilots and the cash savings related to the beneficial outcomes of the pilots.

For the three pilots that have positive economic impact (Link Worker Plus, mcch and St Mungo's) we can calculate the time for which the impact will have to be sustained to make the intervention effective. Assuming that the intervention lasts on average six months, the positive impacts would have to be sustained for about 18 months in the case St Mungo's (costs of £310, economic impacts of £98), and for two years in Link Worker Plus (costs of £615, economic impacts of £159). If the costs of crime are included in Cyrenians' results, then an economic benefit of £851 per month per client is achieved after six months.

Second, the analysis used data collected on individual clients before and after the interventions and assumed that the clients' situations would not have improved or deteriorated had the pilots not supported them. However, that assumption ignores the strong likelihood that individuals who lead chaotic lives are likely to deteriorate without support and in light of this there is a strong presumption that the analysis underestimated the pilots' cost savings and the true alternative to Adults facing Chronic Exclusion would have been higher costs of service use.

Again a simple model calculation underlines this point. Before joining the pilots the monthly costs per client were as high as £1,500 in some pilots (Fairbridge and St Mungo's). Assuming a doubling of those average costs without an intervention then half of the pilots would achieve an economic impact that would justify their costs. Assuming a trebling of costs and all pilots except one would achieve a positive cash balance. In light of the expense of some clients, these assumptions are not outlandish and demonstrate the relevance of the counterfactual.

In conclusion, it might be expected of this client group that the costs of accommodation and benefit costs are more likely to remain over time, unless individuals secured employment and paid the cost of their accommodation out
of their wage. Even in the absence of employment, the costs associated with accommodation and benefits are highly likely to have a beneficial influence on the health conditions of the individual. In other words, it is expected that a client would settle down to a more normal and cheaper care usage pattern once they were settled. There is also some evidence that this security will reduce the likelihood of a person offending, creating further long-term economic benefits.
6. Main findings and implications

The Adults facing Chronic Exclusion pilots that appear to produce the best outcomes for clients at a low cost are those that focus on building relationships with clients and services. The Adults facing Chronic Exclusion programme was designed to test innovative ways of working with excluded adults. The evaluation found that what was innovative about these pilots was their simplicity in comparison to statutory services. The elements of innovation are:

- Dedicated time to working with clients: this included undertaking lengthy tasks and actions on behalf of, and with, clients to understand and address their complex needs and behaviour. Such dedicated time was often not available to local service providers.
- An ethos that was pro-client and capable of assuming risk that might be missing in public services: for example, clients were supported before their background was fully known and the risk that he or she presents could be fully assessed. This allowed the pilots to engage with the client and normalise the client’s relationships with local service.
- The ability to empathise: workers required an understanding from the perspective of a partner and the client. The use of a consistent, trusted adult helps the client group, and this person need not have professional qualifications.

In conclusion, the evaluation found many promising approaches to relieving chronic exclusion among adults. The main findings of the report can be summarised as follows:

1) The client group comprised some of the most chaotic or isolated individuals in a local community, who were hard to reach and difficult to engage. The success of the programme should be interpreted in this light.

2) The work of the pilots was not expensive and most of the expense was attributable to members of staff working one-to-one with clients or in group work.

3) The pilot workers often worked as consistent, trusted adults. They worked effectively with the most chaotic and isolated adults to assist them to navigate the local services and move between transition points in their lives. The pilots were effective in bringing about better outcomes for the individuals, particularly in terms of health.

4) The consistency of the pilot workers was beneficial to persuading local services to engage with the client group, even in circumstances where clients had been previously denied or not engaged. The pilots were effective at bringing about changes in local service delivery by ensuring that services were open to all.
5) Although the work of the pilots saw an increase in expenditure on these adults, expenditure was on beneficial services – health and accommodation – or those that helped to stabilise the client, such as benefits.

6) It is reasonable to assume that in the longer term the pilots’ effects will be greater than those presented.

## 6.1 Implications

These findings have implications for the pilots, local commissioners and policy makers in central and local government and the health service.

**For the pilots:** There is a need for the management of the pilots to ensure that their services fit with local priorities and commissioning strategy. This might require pilots to review the way in which their pilot is delivered to meet local requirements. However, in any such review, pilots should continue to demonstrate the value of the approach of the consistent, trusted adult in the short term and build the arguments for the longer-term benefits of their work. The delivery of their work requires a staff that is experienced and well managed, but inexpensive when compared with qualified social workers or nurses. To work effectively, the staff should be dedicated to assisting clients navigate the system and move between transition points. This involves being flexible and taking an acceptable level of risk to work with the most chaotic and isolated individuals in their area. Non-statutory pilots can also be effective in changing the way in which statutory services operate in respect of their clients, albeit in modest ways.

**For local commissioners:** There is a requirement to recognise that adults facing chronic exclusion are entitled to services and benefits, but can be hard to engage. This calls for a re-appraisal of the engagement criteria for engaging the most chaotic and isolated individuals who are often characterised by their exclusion from services. Commissioners should consider the value of working with pilots to improve access to their services. The pilots have proved that it is possible to deliver services to this chaotic and isolated group via the services of a consistent, trusted adult who can support their staff and the clients. In doing so, this can require close one-to-one working between the client and inexpensive, suitably qualified staff. There is evidence that the cost of health services will fall as clients access services more appropriately. Overall where engagement with a client involves a short-term cost to their service, consideration should be given to the longer-term benefits.

**For policy makers:** The approach of the consistent, trusted adult is effective in ensuring that services are used properly. While there is little evidence that costs are shifting from centrally funded emergency services to locally funded health services, it is apparent that services are being used more appropriately. While the cost of benefits and accommodation increases meant a short term investment in the client group, the Adults facing Chronic Exclusion programmes have demonstrated the value of the consistent, trusted
adult, an approach that can be applied to move individuals, to stabilise individuals, increase employment, enable better use of health services and which has the potential for long-term savings.
7. Knowledge gaps

The evaluation has found strong evidence for how these services, targeted at vulnerable people, can develop in the future, and that simplified support services that work with clients and public services can improve the Adults facing Chronic Exclusion client group’s lives. The current gap in knowledge involves what long-term savings are generated due to a short-term investment in the client group. The evaluation has presented estimates for this impact but better understanding of the longer-term savings will allow better service provision and better use of public money.
8. References


Appendix A: Description of evaluation methods

Process evaluation
The process evaluation used interviews to investigate what the pilots were doing. Three waves of interviews were conducted with pilot workers, managers and local stakeholders from within the pilot and representatives of the pilots’ partners. Each wave focused on a different issue, namely:

1) what the pilot intended to achieve and what actions were taken to achieve its goals
2) the quality of implementation at the pilot and the local processes; and
3) how the pilot approached mainstreaming and local system change.

In addition, pilot staff attended workshops to discuss their pilot’s theory of change in depth and to compare this to the outcomes evidence collected. All qualitative data was analysed using the framework approach (Ritchie, 2008).

Impact evaluation
The impact evaluation measured outcomes for clients across each of the pilots. Outcome data were collected using two questionnaires, each administered by staff at the pilot sites. The first questionnaire (Questionnaire A) was administered at the start of intervention and either every six months from then on or when the client completed the intervention, whichever was earlier. The second questionnaire (Questionnaire B) was administered at monthly intervals between the two Questionnaire As. Three data groups were collected:

- the clients’ perceptions of their well-being and health
- the clients’ use of health services and receipt of benefits (to understand system change); and
- the clients’ accommodation status, employment status and offending (to understand transition points).

These data were registered on an online database. As of June 2010, 913 clients were registered. However, clients were not obliged to take part in the evaluation or could leave the pilot so changes in outcomes are measured for only 416 clients (45 per cent). Table A.1 describes how many clients’ outcomes were measured at different time points and illustrates how the numbers reduced over time, as the clients left the pilots. Due to the chaotic nature of the client group, pilots were often unable to measure changes in outcome every month; therefore few clients have data recorded for each month of their involvement in the programme.
### Table A.1: Data available at each pilot

<table>
<thead>
<tr>
<th>Pilot</th>
<th>Number of clients with data at each time point (months)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 (Start)</td>
</tr>
<tr>
<td>Calderdale MAZE Project</td>
<td>66</td>
</tr>
<tr>
<td>Fairbridge</td>
<td>45</td>
</tr>
<tr>
<td>Forensic Therapies</td>
<td>86</td>
</tr>
<tr>
<td>Inside, Outside</td>
<td>63</td>
</tr>
<tr>
<td>Link Worker Plus MK</td>
<td>122</td>
</tr>
<tr>
<td>mcch Pathways</td>
<td>31</td>
</tr>
<tr>
<td>NOAH Enterprise</td>
<td>33</td>
</tr>
<tr>
<td>New Directions Team South West London</td>
<td>48</td>
</tr>
<tr>
<td>St Mungo’s</td>
<td>182</td>
</tr>
<tr>
<td>The Employment Project Thames Reach</td>
<td>134</td>
</tr>
<tr>
<td>Cyrenians</td>
<td>34</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>844</strong></td>
</tr>
</tbody>
</table>

Descriptive statistics of the mean changes in outcomes described the changes from before engagement with the pilot to three, six and nine months later. If a client’s outcomes were not measured at three, six and nine months, he or she was removed from the baseline figures.

To understand the extent to which observable outcomes could be attributed to the pilots, each outcome was analysed using a regression analysis. The first stage involved a review of the variables available in the collected data for their reliability and value to the statistical modelling in terms of:

- the likelihood of bias in responses to sensitive questions due to social desirability influences
- the amount of variance in the data across all clients; and
- the proportion of missing data.

The second stage involved developing a regression model using a recognised approach for analysing longitudinal data with missing time points (Overall, 2009). Please see Appendix B for a detailed description of the impact analysis.

**Cost effectiveness evaluation**

The cost effectiveness study compares the cost of the pilots relative to their economic impact. It used data from the questionnaires and a survey of what services were delivered to the clients and cost data. Analyses of these data calculated:

- pilot resource use: monthly input and spending (in £) of the pilots per client
an indicator of service use: i.e. total monthly value of other public service use of clients before and during the intervention – use of health services, children in care, accommodation costs and receipt of benefits; and

health outcomes: the study analysed the change in the clients' health during the intervention, and valued this according to general UK practice in Quality-Adjusted Life Years.\textsuperscript{21}

The impact evaluation and the cost effectiveness evaluation results show the same trend but specific results might be different between the two analyses. This is because each used different analysis methods and therefore had different approaches to dealing with missing numbers and outliers.

\textsuperscript{21} A Quality-Adjusted Life Years is a measure of quality and quantity of life.
Appendix B: Data model and concept

The impact analysis was greatly influenced by the unique characteristics of the Adults facing Chronic Exclusion pilots and their clients – not only were the clients’ lives inherently chaotic, but the information being collected was often of a sensitive nature. Therefore, the first stage of the analysis involved a review of the variables available in the collected data for their reliability and value to the statistical modelling in terms of:

- the likelihood of bias in responses to sensitive questions due to social desirability influences
- the amount of variance in the data across all clients; and
- the proportion of missing data

Variables of particularly low reliability and value were excluded from the statistical modelling to reduce the risk of spurious results being produced and to increase the sample sizes, and hence statistical power, available for identifying associations. The remaining variables were qualitatively evaluated to determine whether they were outcomes (to be modelled as response variables) or explanatory factors (incorporated in models as control variables). The explanatory factors were grouped and the resulting conceptual framework was used to develop the initial specifications for the statistical modelling of the outcomes. The conceptual framework is presented below in Figure B.1.

![Diagram](image)

**Figure B.1**
Model specification

The longitudinal nature of the outcome variables along with the high degree of missing data posed considerable challenges to the statistical modelling. In order to identify whether there was a pattern underlying the changes in outcomes over time, the average of each outcome was plotted across time by pilot. The study period was assumed to be the first 12 months of service use. No discernible patterns were identified that would lead to the choice of a non-linear change in the response variable over time and so, in order to maintain a parsimonious form for the models, a simple linear form was assumed. The majority of clients had a large proportion of missing data for outcomes, with often only very few months of data collected.

This high degree of missingness can cause problems for the multi-level specifications usually used to model clustered longitudinal data of this type, and so an alternative method was used. Following Overall (2009), a two-step regression method was selected. This method involves calculating the rate of change over time in outcomes for each client and then weighting the result by the proportion of data that has been used to calculate it. These weighted rates of change (weighted slopes) are then used as response variables in statistical models. For example, if a client had four months (of a possible 12) of data spread across time, the rate of change would be calculated and then weighted by 4/12=0.333. Hence, those clients who have more data are inherently regarded as more reliably measured and given more weight. This approach also prevents unusually high rates of change from clients with little data biasing the analyses, and removes the difficulties associated with working with data with high degrees of missingness. It should be noted, however, that this method is inherently conservative where there is a high proportion of missing data.

Model selection was carried out using a backward selection approach – all variables were entered into the model as marginal effects and then removed in order of increasing significance until all remaining variables were significant (α=10 per cent). The only exceptions to this rule were the inclusion of the pilot site identifier and the baseline outcome. A significance level of 10 per cent was chosen because of the small sample sizes available. The specification for the models is described formulaically in Equation 1 below.

\[ y_{w\beta} = \beta_0 + \beta_1 x_1 + \beta_1 x_1 ... + \beta_n x_n + \varepsilon \]

where \( y_{w\beta} \) = the weighted rate of change in the modelled outcome  
\( \beta_0 \) = the model intercept  
\( x_1 \) to \( x_n \) = explanatory variables  
\( \beta_1 \) to \( \beta_n \) = the regression coefficients of the explanatory variables  
\( \varepsilon \) = a normally distributed random error