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## **Evaluation of the MEAM pilots: Technical Appendix**

**A report by FTI Consulting and Compass Lexecon for Making Every Adult Matter (MEAM)**

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## Contents

### Glossary

#### Section

1.	Introduction	1
2.	Evaluation design	2
3.	Our analysis of client wellbeing	5
4.	Our analysis of client service use	9
5.	Selection of unit costs	16

## Glossary

CPI	Consumer Price Index.
DCLG	Department for Communities and Local Government.
GDP	Gross Domestic Product.
GDP deflator	The ratio of GDP measured in constant price series to GDP measured in real price series.
MEAM	Making Every Adult Matter.
RPI	Retail Price Index.

## 1. Introduction

1.1 In this Technical Appendix, we provide additional information about our methodology for the interested reader. We consider:

- (1) **the evaluation design:** our evaluation assumes that service use in the previous year is a reasonable proxy for clients' service use had they not participated in the pilot. We explain why we consider this to be the case and why we decided to conduct a before and after study as opposed to a control group study;
- (2) **our analysis of client wellbeing:** we explain how we treat missing wellbeing data and the statistical tests that we have applied to wellbeing scores;
- (3) **our analysis of service use:** we explain how we have estimated counterfactual service use using prior year data and demonstrate the effect of changing some of our assumptions. We explain how we treat missing service use data and consider the effect on our results of our decision not to incorporate future changes in service use in our analysis. Finally, we compare our findings to those of other studies; and
- (4) **the unit costs we have applied to service use data:** we discuss our decision to use average, rather than marginal, unit costs and the adjustments we have made to unit costs published in earlier years.

## 2. Evaluation design

### How do you estimate what would have happened to the clients if they had not participated in the pilot?

- 2.1 To conduct our evaluation, we need to estimate what would have happened to the clients had they not participated in the pilot. We call this the scenario the 'counterfactual'.
- 2.2 Our estimate of counterfactual service use for this study is based upon each client's situation before enrolling in the pilot. We assume that, in the counterfactual, each client would have maintained their level of service use as in the previous year. For the wellbeing analysis, we assume that their position at the beginning of the pilot would have remained constant.
- 2.3 We assume that a client's enrolment in the programme is the only factor that caused their service use and wellbeing to change over time. As an alternative to this assumption, we considered the use of a control group.
- 2.4 Use of a control group requires excluding some individuals from the intervention being tested. This raises obvious ethical and practical concerns. For example, a New York housing programme that adopted a randomised approach to helping homeless people was the subject of widely reported adverse criticism, even though the programme had insufficient capacity to help all individuals.<sup>1</sup>
- 2.5 Due to the ethical and practical concerns of excluding individuals from the pilots, after discussing the issue with MEAM, we decided not to adopt a control group approach. We have therefore considered whether there are factors that could have affected clients' wellbeing and service use other than their enrolment in the pilot programme. Any such factors can be divided into two groups:
- (1) external factors; and
  - (2) reversion to the mean.
- 2.6 By external factors, we mean changes to the clients' lives that are not a result of the pilot. These changes could be the result of an improvement in the strength of the economy, the adoption of a new government policy or changes to the way local services are operated.

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<sup>1</sup> Buckley, 9 December 2010, *To test housing programme, some are denied aid*, New York Times.

- 2.7 By 'reversion to the mean', we mean clients' behaviours changing naturally, rather than as a result of the pilot or any external factors. For example, clients were selected because of their high NDT scores. It is possible that their high NDT scores were a 'one-off' and that they may have reduced naturally over time, without the intervention of the pilot.
- 2.8 We do not consider that external factors or reversion to the mean are likely to have materially affected our conclusions. This is for three reasons:
- (1) The pilot clients have typically had multiple needs for a long time and been involved with local services in an attempt to address those needs for a long time.<sup>2</sup> The failure of existing services to adequately address clients' multiple needs suggests that these needs would probably have continued had they not enrolled in the pilot and that external factors are unlikely to have had an impact. Our analysis considered service use over the twelve months prior to enrolment in the pilot. We are therefore confident that we have not adopted a counterfactual scenario based upon only a few months of chaotic behaviour.
  - (2) Work by organisations such as Revolving Doors Agency<sup>3</sup> and the previous government's Adults Facing Chronic Exclusion Programme<sup>4</sup> indicates that adults experiencing multiple needs become trapped in an ongoing cycle from which there is no easy escape. These studies show that individuals in this situation are likely to require specific help to change their behaviours.
  - (3) When asked about the effect of the pilot on their lives, clients stated that their situation would likely have deteriorated further without help from the pilots.
- 2.9 We therefore consider that the changes in clients' wellbeing and service use are likely to be a result of either enrolment in the programme or chance, as opposed to external factors or reversion to the mean. In the case of wellbeing, the statistical tests we discuss in Section 3 of this document suggest that chance is unlikely to have been responsible for the change observed.

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<sup>2</sup> See page 5 of our main report.

<sup>3</sup> Revolving Doors (2010), *Why multiple needs should be a key consideration in the development of the "rehabilitation revolution" Green Paper and subsequent reforms.*

<sup>4</sup> Cattell and Mackie (2011), *Simple but effective: Local solutions for adults facing multiple deprivation*, Communities and local Government.

- 2.10 Our approach assumes that clients' situations would have neither improved nor deteriorated had they not enrolled in the pilot. Other studies of adults with multiple needs have considered that the situation of individuals leading chaotic lives is likely to deteriorate without support.<sup>5</sup> This is a more pessimistic assumption than the one we have made.
- 2.11 There is one scenario in which our counterfactual assumption may not be valid. This is if, as a result of engagement with the programme, clients who would have died instead lived, or stayed healthy rather than became very ill. This would either reduce or increase costs accordingly. We do not consider that this has a material effect on our conclusions.

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<sup>5</sup> Cattell and Mackie (2011), *Simple but effective: Local solutions for adults facing multiple deprivation*, Communities and local Government, page 34.

### 3. Our analysis of client wellbeing

#### How do you treat missing wellbeing data?

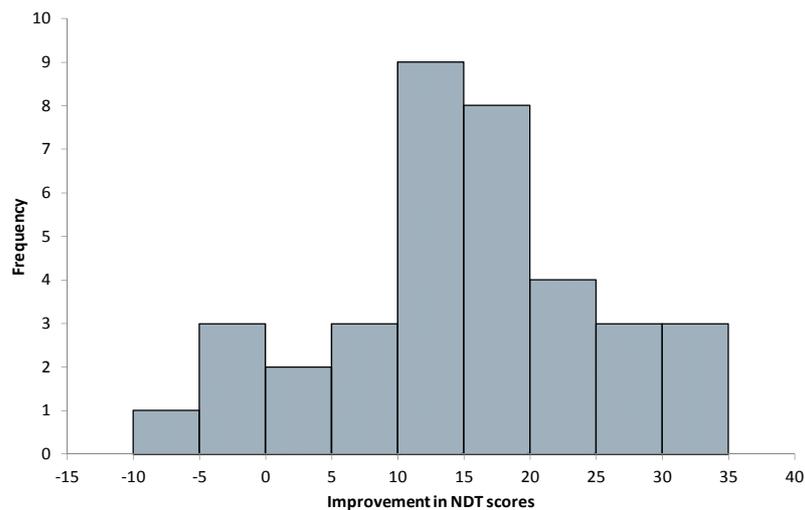
- 3.1 We were not able to collect some wellbeing data points for a variety of reasons, including:
- (1) clients leaving the service before final wellbeing data could be collected; and
  - (2) clients not being contactable at the relevant time.
- 3.2 When a client could not be contacted to complete a questionnaire, this client was excluded from that part of our analysis. (When a client did not complete an “after” questionnaire, we did not consider their responses to the “before” questionnaire so that the “before” and “after” samples covered the same individuals). From the 39 clients, we collected 36 sets of NDT scores, 33 sets of WEMWBS scores and 31 sets of Outcomes Star scores.
- 3.3 Where clients did not provide answers to specific questions in a wellbeing measure, we exclude that client’s response to that particular question only. For example, suppose that the sample consisted of ten clients with one client declining to answer one particular question. For the question that the tenth client declined to answer, we compare the responses before and after enrolment in the programme across the remaining nine clients who provided both “before” and “after” responses. For all other questions, we compare the responses before and after enrolment across all ten clients. This approach ensures that the weighting of individuals in the “before” and “after” datasets is always the same.

#### You say that there was a statistically significant improvement in participant wellbeing. What do you mean by this?

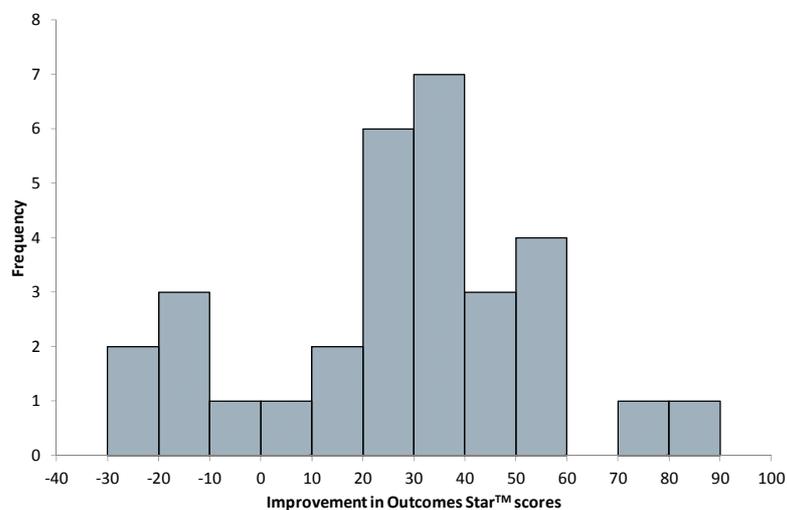
- 3.4 In statistics, a result is referred to as ‘statistically significant’ if it is unlikely to have occurred by chance. We have performed our tests using a 1% significance level. Our results therefore show that there is a less than 1% chance that the improvements in wellbeing that we observed have occurred by chance.

- 3.5 All three of the wellbeing scales that we used are ordinal scales but not necessarily interval scales. The probability distribution of the difference in wellbeing score from one observation to the next is unknown and not necessarily normal. We have therefore performed a non-parametric test of statistical significance, the Wilcoxon matched pairs signed rank test. The null hypothesis for this test is that the difference in wellbeing score between the first and final observations has a median value of zero.
- 3.6 Suppose that we have a pair of wellbeing observations for  $n$  individuals and that the difference between the two scores of individual  $i$  is  $d_i$ . The Wilcoxon matched pairs signed rank test assumes that the distribution of differences is symmetrical. The histograms below show the distribution of the improvements in wellbeing scores for the clients included in our analysis. Given the relatively small sample sizes, we consider that these histograms are consistent with the assumption that the improvement in score for each individual is symmetrically distributed.

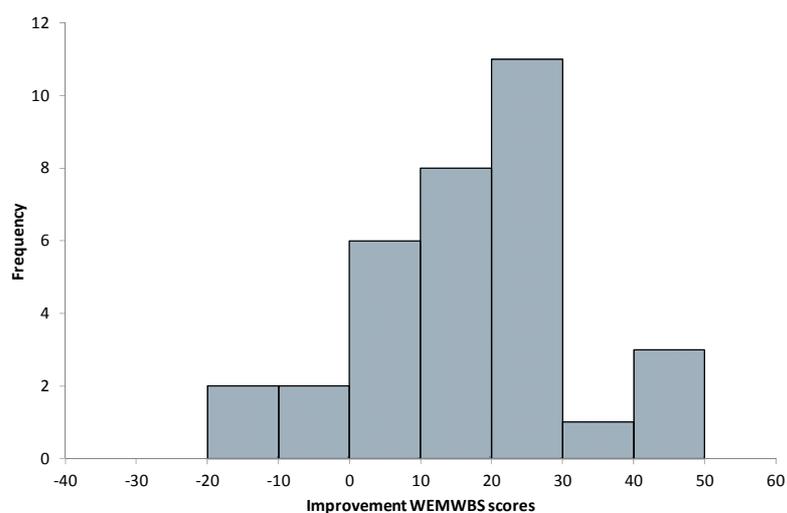
**Figure 3-1: Distribution of improvements in NDT scores**



**Figure 3-2: Distribution of improvements in Outcomes Star™ scores**



**Figure 3-3: Distribution of improvements in WEMWBS scores**



3.7 We have performed statistical tests for each of the three wellbeing scales as follows:

- (1) We exclude from our analysis any observations with  $d_i = 0$  and denote the reduced sample size  $m$ .
- (2) We order the absolute values of the  $d_i$  in ascending order and let the rank of each non-zero  $d_i$  be  $R_i$ . The lowest absolute non-zero difference receives a rank of one and the highest a rank of  $m$ . A mean rank is assigned to tied differences.

- (3) We calculate statistics  $W_+$  and  $W_-$  by summing the ranks corresponding to positive and negative differences as follows:

$$W_+ = \sum_{i: \text{sign}(d_i) > 0} R_i$$

$$W_- = \sum_{i: \text{sign}(d_i) < 0} R_i$$

- (4) We calculate the test statistic  $W$  as the lower of  $W_+$  and  $W_-$ .
- (5) We compare  $W$  to the 1% critical value.

3.8 Table 3-1 below shows the sample sizes ( $n$  and  $m$ ), 1% critical values and test statistics for the NDT, Outcomes star and WEMWBS scores.

**Table 3-1: Results of the Wilcoxon matched pairs signed rank test**

	<b>NDT</b>	<b>Outcomes Star</b>	<b>WEMWBS</b>
Sample size ( $n$ )	36	31	33
Reduced sample size ( $m$ )	35	31	33
1% critical value	159	118	138
<b>Test statistic (<math>W</math>)</b>	<b>43</b>	<b>93</b>	<b>127</b>

*Notes: The source for the critical values is Neave, H.R and Worthington, P.L., Distribution Free Tests, London, Unwin Hyman.*

3.9 Table 3-1 shows that, for each wellbeing scale, the test statistic is lower than the 1% critical value. This indicates that there is sufficient evidence to reject the null hypothesis of a zero median at the 1% level. The improvement in wellbeing scores is therefore statistically significant at the 1% level.

## 4. Our analysis of client service use

### How do you estimate clients' service use had they not participated in the pilot?

- 4.1 Our estimate of service use if clients had not participated in the pilot is based upon service use in the twelve months prior to enrolment. When selecting the period of time over which service use should be measured prior to enrolment, two factors need to be considered:
- (1) whether the period is long enough so as not to be skewed by months of unusually high or low service use; and
  - (2) whether the period is short enough to be representative of the situation at the date of enrolment, which might differ to the situation in the months before.
- 4.2 Selecting the appropriate time period for our analysis requires a balance of these two factors. We decided that a period of twelve months was reasonable, but also considered the effect of adopting a shorter period. The table below shows the number of clients whose costs in each category decreased or increased during the pilot compared to their service use in the three months, six months, nine months and twelve months before enrolment.
- 4.3 Monthly pre-enrolment data is not available for Cambridgeshire and so all columns in Table 4-1 below are based upon the twelve months prior to enrolment in that pilot area.

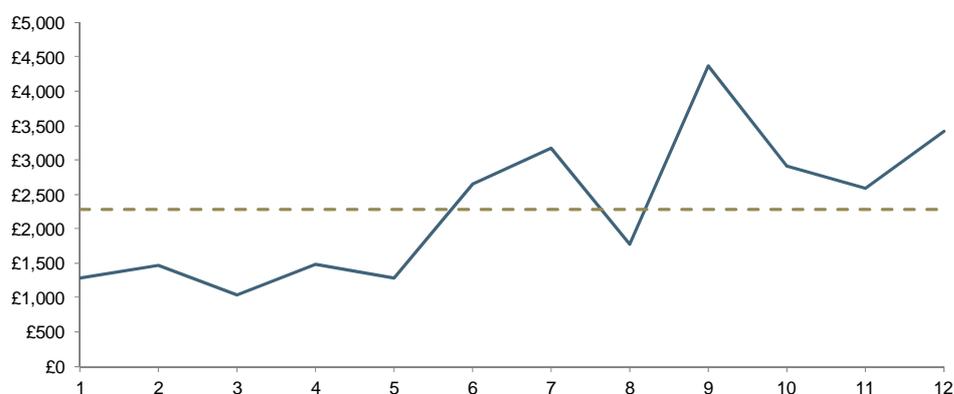
**Table 4-1: Number of clients whose service costs decreased or increased depending on the number of months used to assess the counterfactual**

Counterfactual	3 months		6 months		9 months		12 months	
	Down	Up	Down	Up	Down	Up	Down	Up
Recorded offending	18	9	16	10	13	12	12	14
Health	6	11	7	8	7	9	5	9
Drugs and alcohol	2	5	2	5	2	5	2	5
Housing	9	14	9	14	9	14	10	14
<b>Total</b>	<b>13</b>	<b>19</b>	<b>12</b>	<b>20</b>	<b>9</b>	<b>23</b>	<b>11</b>	<b>23</b>

*Note: Where service use changes in a category are minimal (less than £1,000), we exclude that client from the relevant row of this table. This table therefore shows only meaningful changes in service use.*

- 4.4 Table 4-1 above shows that a larger proportion of clients show a decrease in service use costs when their service use is compared to a shorter pre-enrolment period. This is because the service use of many clients followed an increasing trend in the year prior to enrolment, which may have been a factor in the client being selected to participate in the pilot. Figure 4-1 below shows this trend for the clients in the Derby and Somerset clients.

**Figure 4-1: Average service use costs in the twelve months prior to enrolment in Derby and Somerset**



Note (1): Monthly pre-enrolment data is not available for Cambridgeshire.

Note (2): The dashed line shows the average monthly service use costs in the 12 months prior to enrolment.

- 4.5 Our approach compared service use to the twelve month period prior to enrolment. This results in a less positive cost benefit analysis than we would obtain using a period of three or six months.

#### How do you treat missing service use data?

- 4.6 Service use data is collected monthly, and in some cases specific service use data was unavailable over a certain time period after enrolment in the pilot. Where this is the case, we estimate counterfactual service use by prorating the service use in the previous year to the number of months for which we have data for service use in the pilot. For example, if we are missing the last six months of crime data for a client who was in the pilot for a full twelve months, we estimate counterfactual service use by dividing service use in the previous year by two. This means that both the counterfactual and the actual service use figures relate to a period of six months so that they are comparable.

- 4.7 In the case of housing data, we have partial housing information in a number of months for many clients. We do not remove these months from our analysis as in some cases there are just a few days of missing data. We considered three ways of treating partial housing data:
- (1) **assigning a zero unit cost:** this assumes that, on nights where no housing records are available, the client was more likely to have slept rough or spent the night with friends or family;
  - (2) **assigning the average unit cost assigned for the rest of the month:** this assumes that, on nights where no housing records are available, the client's housing situation is likely similar to the situation on nights where housing records are available; and
  - (3) **assigning half the average unit cost assigned for the rest of the month:** this approach produces a result halfway between that of Approach 1 and Approach 2.
- 4.8 A zero unit cost assumes that the housing situation is not independent of whether or not housing records are available while an average unit cost assumes that a lack of housing records is no indication that the client had no accommodation for the night. In reality, the situation is likely to be between these two extremes. In some cases where there are no housing records, the client is likely to have had no access to accommodation while in other cases, they may have found accommodation about which the data providers do not keep records.
- 4.9 Table 4-2 below shows the total increase in housing costs after enrolment in the pilots under each approach.

**Table 4-2: Increase in housing costs after enrolment under each approach to partial housing data**

	<b>Approach 1 (zero unit cost)</b>	<b>Approach 2 (average unit cost)</b>	<b>Approach 3 (half average unit cost)</b>
	<b>£000</b>	<b>£000</b>	<b>£000</b>
Actual service use	£267	£289	£278
Less: Counterfactual service use	£(198)	£(262)	£(230)
<b>Increase in housing costs</b>	<b>£69</b>	<b>£27</b>	<b>£48</b>

- 4.10 Under all three approaches, housing costs in all three areas increased. We observed that the number of nights of unknown whereabouts tended to be lower during the pilot than prior to the pilot. This may be because it is easier to collect more recent data, or because clients' housing situations became more regular. As a result, the increase in housing costs is greatest under Approach 1 and least under Approach 2. The approach we have taken in the main body of our report is Approach 1, the most conservative approach.

**How do you treat prison sentences, where the time spent in prison is unknown?**

- 4.11 In many cases, the length of a prison sentence (shown on a client's Police National Computer record) and the length of time actually served differ. Where we cannot determine the exact period spent by a client in prison, we assume that half of the original sentence was served. In each case, we have cross-checked this assumption against any housing data collected and checked it for reasonableness with the relevant service coordinator.

**Do you analyse service use once clients have been discharged?**

- 4.12 Yes. Where clients were discharged before the end of the study period, we reflect their service use between the date of discharge and the end of the study period in our analysis. We do this so as to include within our results the total effect of the pilot on these individuals' service use up to the end of the study period, whether or not the client remained enrolled in the pilot. We do this both where clients left for a positive reason (such as reconnecting to local services) and where they left for a negative reason (such as a prison sentence).

**Did you incorporate any future benefits?**

- 4.13 No. Our analysis may therefore underestimate the total effect of the pilots.
- 4.14 It is likely that changes in service use will continue at least as long as clients continue to participate in the programme. Once clients are discharged, they may continue to improve their service use, maintain the same service use, or return to their earlier pattern of service use. We do not know whether changes in service use will continue into the future and, if so, for how long. So as not to overestimate the effects of the programme, we do not include any effects other than those that have already been observed.
- 4.15 A small number of the clients included in our analysis were discharged before the end of the study period. We therefore have service use data for these clients after discharge. However, the number of such clients is relatively small and the period of post-discharge data is short. Therefore, we have not been able to reach any conclusions on how service use evolves after discharge. This would be an interesting topic for further research.

**When analysing service use data, do you have “before” and “after” data split at the exact date on which the client enrolled in the programme?**

- 4.16 No. Service use data for all clients has been collected for individual calendar months whereas clients do not necessarily enrol in the pilot on the first day of the month.
- 4.17 In our analysis, we allocate the month of enrolment to the “before” or “after” period depending upon whether the date of enrolment is after or before the 15<sup>th</sup> day of the month respectively.

**Did you capture the entire cost of service use by the clients?**

- 4.18 There are inevitably certain costs that we did not capture as it was not possible to collect data on all aspects of service use. Certain items of data were not collected because it was not practical to do so.
- 4.19 In addition, our costs do not reflect all behind the scenes work on behalf of clients, for example when a recorded intervention such as an arrest results in actions from another agency, the cost of time for the employee of that agency is not factored into our calculations. This is the case for both the actual and counterfactual scenarios. We do not consider that these omitted costs are likely to be material in comparison to the high costs of service use associated with the client group.

**Are your conclusions consistent with those of other studies?**

- 4.20 This is not the first study to consider the cost effectiveness of interventions for adults experiencing multiple needs. Examples include a study by Revolving Doors Agency in 2000<sup>6</sup> and the evaluation of the Adults Facing Chronic Exclusion programme, discussed below.
- 4.21 Researchers have previously conducted interviews with adults with multiple needs to determine the progression of their needs and service use over the course of their lives. By piecing together typical experiences, they have traced a pathway through the “stages” of multiple needs.<sup>7</sup>

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<sup>6</sup> Finn et al (2000), *Mental health, multiple needs and the police: Findings from the Link Worker scheme*, Revolving Doors Agency.

<sup>7</sup> For example Fitzpatrick, Bramley and Johnsen (2012), *Multiple Exclusion Homelessness in the UK: An Overview of key Findings, Briefing paper No. 1*.

- 4.22 Revolving Doors Agency has used this approach to model how individuals progress through various stages of multiple needs.<sup>8</sup> The model is a Markov process where transition rates are based on the general experiences of individuals at each stage. The typical service use of an individual in each stage is used to analyse the cost as the individual moves between stages. The potential savings associated with a given intervention are estimated by considering the effect of the intervention on the transition rates between stages. The results of this analysis are interesting. In particular, Revolving Doors Agency observes that some interventions can result in an initial increase in service use costs followed by an eventual decrease resulting in overall cost savings.
- 4.23 In September 2006, the Government launched a series of twelve pilots over a three year period for “Adults facing Chronic Exclusion”.<sup>9</sup> The twelve pilots included in the evaluation were diverse, with some focussing on particular needs such as unemployment and others focussing on multiple needs. The Milton Keynes Link Worker Plus project, and the New Directions Team project (South West London and St George’s Mental Health Trust in the London Borough of Merton), were used to inform the MEAM pilots. . Both projects facilitate the engagement of clients with services, focusing on people who are in crisis because of a combination of mental health needs, accommodation problems, substance misuse, offending or anti-social behaviour. Workers support clients who have traditionally struggled to engage with services to access appropriate support.
- 4.24 The Adults facing Chronic Exclusion study included an assessment of cost effectiveness. This evaluation considered the cost of:
- (1) health services;
  - (2) benefits;
  - (3) children in care; and
  - (4) accommodation.
- 4.25 Unfortunately, the study did not include an analysis of crime data.

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<sup>8</sup> Further information about the Revolving Doors Agency financial model is available at <http://www.revolving-doors.org.uk/policy--research/policy-projects/economic-model/>

<sup>9</sup> Cattell and Mackie (2011), *Simple but effective: Local solutions for adults facing multiple deprivation*, Communities and local Government.

- 4.26 The evaluation showed that the Linker Worker Plus pilot resulted in cash savings to health services but that these were more than offset by additional costs in the other three areas of expenditure. However, when a monetary value was placed upon the observed improvement in clients' health, the authors concluded that the overall economic effect was positive, even though it did not result in cash savings.
- 4.27 The evaluation of the Link Worker Plus project considered 122 clients, with more than three months of data collected for 84 of these.
- 4.28 This study is interesting because it shows that significant health saving can be achieved in some circumstances. In contrast, our findings show an overall increase in health costs.
- 4.29 We note that the authors reached the view that a before and after comparison of service use is likely to underestimate economic benefits for this client group as there is a "*strong likelihood that individuals who lead chaotic lives are likely to deteriorate without support*".

## 5. Selection of unit costs

### Do you use average or marginal unit costs?

- 5.1 We used average unit costs drawn from relevant government and academic sources.
- 5.2 We recognise that a change in the pattern of service use by clients will result in savings to Government at the marginal cost of service provision and not at the average cost of service provision. However, we have not been able to obtain reliable marginal unit costs. In the absence of such costs we have instead used average costs.
- 5.3 We use the same unit costs in both our calculations of actual and counterfactual service use. If the relationship between average and marginal costs is similar across cost categories, we would not expect the direction of changes in the cost of service provision to change if marginal costs were used.
- 5.4 Where the reduction in clients' chaotic service use does not result in cash savings, there may be benefits due in the form of better services for other uses, including shorter waiting times and quicker response times from emergency services.

### What adjustments have you made to unit costs published in prior years?

- 5.5 We have been unable to identify recently published sources for some unit costs. As a result, we have relied upon the cost of providing these services in earlier years. It is possible that the cost of providing these services today differs to those quoted in earlier sources due to:
- (1) inflation;
  - (2) changes in public sector productivity; and
  - (3) changes in the process by which these services are provided.
- 5.6 In the absence of more up to date unit costs, we rely upon earlier sources but have considered the appropriate adjustment in respect of these three effects. We describe the adjustments we apply in the following paragraphs.

- 5.7 We adjust for inflation using the Gross Domestic Product (“GDP”) deflator. We use the GDP deflator rather than a measure such as the Retail Price Index (“RPI”) or Consumer Price Index (“CPI”) since the GDP deflator is a much broader price index that reflects the prices of all domestically produced goods, and does not measure only consumer prices. HM Treasury states that the wider coverage of the GDP deflator makes it more appropriate for deflating public expenditure series.<sup>10</sup>
- 5.8 In the case of sector specific costs, it is sometimes appropriate to use a price series specific to the relevant sector. The health sector is one such example but, since all our health unit costs except one are already expressed in 2011 terms, for simplicity we also use the GDP deflator to inflate this one cost.
- 5.9 Table 5-1 below compares the effect of using the GDP deflator, the CPI and the RPI to adjust for inflation.

**Table 5-1: Effect of adjusting for inflation using the GDP deflator, RPI and CPI**

Year of unit cost publication	Price series			Inflation adjustment <sup>(1)</sup>		
	GDP deflator	CPI	RPI	GDP deflator	CPI	RPI
1999 <sup>(2)</sup>	77	92	165	31%	27%	42%
2000	77	92	170	30%	27%	38%
2001	78	93	173	28%	26%	36%
2002	80	95	176	25%	24%	33%
2003	82	96	181	22%	23%	30%
2004	84	97	187	19%	21%	26%
2005	86	99	192	16%	19%	23%
2006	89	101	198	13%	17%	19%
2007	91	104	207	10%	13%	14%
2008	93	106	215	7%	11%	9%
2009 <sup>(3)</sup>	95	109	214	5%	7%	10%
2010	98	113	224	2%	4%	5%
2011	100	118	235	0%	0%	0%

Note (1): Inflation adjustment in year *n* is calculated from price series as:

$(2011 \text{ price series} - \text{year } n \text{ price series}) / \text{year } n \text{ price series}$ .

Note (2): The source for magistrates and crown court costs relates to 1999. These are the oldest costs that we use.

Note (3): The source for night shelter, direct access hostels and Second stage supported accommodation unit costs relates to 2009.

Sources: ONS and Treasury data sets.

<sup>10</sup> HM Treasury (2006), *User's guide: Background information on GDP and GDP deflator*.

- 5.10 The table above shows that using the GDP deflator results in an inflationary uplift similar to that achieved using the CPI and lower than that achieved using the RPI.
- 5.11 We have considered whether changes in public sector productivity may have resulted in changes to unit costs. We reviewed several productivity reports by the Office for National Statistics.<sup>11</sup> It appears that changes to productivity over time have been mixed, with some areas showing an increase in productivity and others a decrease. Given these mixed findings we decided not to make further adjustments to our unit costs for changes in public sector productivity.
- 5.12 We have considered the possibility that, in addition to changes in productivity, changes to system processes may have affected the level of unit costs. For example, simplification of the legal system could (in theory) reduce the cost associated with a court appearance. Without performing a full review of the current make-up of each unit cost, we cannot comment on such effects. We assume that process changes have not resulted in material changes to unit costs.

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<sup>11</sup> See for example: ONS, *UK Centre for the Measurement of Government Activity: Annual Report 2009-10*; ONS, *Productivity Handbook*, Chapter 9 (Public Service Productivity); ONS, *Public Service Productivity Paper 1: Adult Social Care*, September 2007.



### **The authors**

Dr Boaz Moselle is a Senior Managing Director at FTI Consulting. Boaz is an economist who has worked in academia, consulting and government. As a consultant he has provided advice to governments and corporations in many countries on a wide range of energy policy, competition and regulatory matters.

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### **Contact details**

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### **Pro Bono Economics (PBE)**

PBE has supported this work as part of its mission to help charities measure their performance better and demonstrate the results of their work. The views expressed in this report are not necessarily those of PBE.

PBE matches volunteer economists with charities wishing to address questions around measurement, results and impact. Through this PBE hopes to achieve two objectives:

- (1) improved effectiveness of the charity sector; and
- (2) a valued contribution by economists both to the sector and to their professional development.

PBE is funded by the City Bridge Trust, the Economic and Social Research Council, the Esmée Fairbairn Foundation, the Garfield Weston Foundation and the Monument Trust. It is with their support that we can undertake this work.

### **FTI Consulting**

FTI Consulting is a global business advisory firm that provides multidisciplinary solutions to complex challenges and opportunities. With the full power of unique depth of thought combined with the global expertise of leading professionals, we are committed to protecting and enhancing the enterprise value of our clients.

### **Compass Lexecon**

One of the world's leading economic consulting firms, Compass Lexecon provides law firms, corporations and government clients with clear analysis of complex issues. We have been involved in a broad spectrum of matters related to economics and finance – providing critical insight in legal and regulatory proceedings, strategic decisions and public policy debates.

### **Making Every Adult Matter (MEAM)**

Making Every Adult Matter (MEAM) is a coalition of four national charities – Clinks, DrugScope, Homeless Link and Mind – formed to influence policy and services for adults facing multiple needs and exclusions. Together the charities represent over 1,600 frontline organisations working in the criminal justice, drug treatment, homelessness and mental health sectors. MEAM is supported by the Calouste Gulbenkian Foundation.