An economic analysis of Acacia Family Support’s befriending service

Final Report

Acacia Family Support

July 2012
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A Final Report submitted by GHK Consulting Ltd

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Executive summary

Acacia Family Support is a growing Christian charity working to improve the lives of families suffering from post natal depression (PND). Acacia delivers a range of services for mothers and families with varying levels of need. This analysis concentrates exclusively on Acacia’s ‘befriending’ service, providing a Social Return on Investment (SROI) analysis to show the value of Acacia’s work in economic terms.

Post natal depression: prevalence, causes and effects

PND can be a serious and debilitating condition; it has been shown to:

- Harm the quality of family relationships;
- Increase the risk of poorer outcomes for children;
- Correlate with future poor mental health; and,
- Increase the use of restorative health services.

PND has various causes and affects around 13% of new mothers. Mothers are more likely to experience PND if they: have a previous history of mental illness; are experiencing other stressful life events; are experiencing marital conflict; lack of social support; and / or, are a lone parent. Despite increased knowledge around PND, less than half of cases are detected in routine primary care.

Description of service

Acacia’s befriending service has run for the last seven years. It has recently expanded, using (commissioned) funding from NHS Birmingham East and North (BEN). The service works with mothers suffering PND and is delivered by trained volunteers. Volunteers have very often had previous experience PND themselves and are provided with supervision; training; and pastoral support by Acacia staff. The main elements of the service are shown below:

- Hospitality, ensuring that mothers accessing the service are comfortable and feel they are in a safe environment;
- A resource library, offering literature about PND which beneficiaries are given access to as soon as they access the service. Literature is also immediately sent to mothers as soon as they are referred into the service;
- Social events for recovered mums;
- Baby bonding sessions;
- Baby Massage Sessions;
- Weekly individual post-natal support sessions;
- Telephone support;
- Mothers’ aromatherapy and relaxation service;
- School holiday family activity sessions; and,
- Awareness raising work with professionals and related organisations to raise awareness of PND.

A structured pathway of follow up support as mothers exit the service works to ensure that the outcomes achieved are sustained into the future (shown in the figure to the right). Measures have been put in place by Acacia to alleviate the barriers to engaging with services providing hospitality, free childcare at an onsite crèche and assistance with transportation costs. This type of support is rarely available to beneficiaries engaging with mainstream services.

Framework for the analysis

Creating a list of all of the relevant benefits and costs for the service is a key step in a SROI analysis. This was produced using a logic model (see figure overleaf). Such models are useful in SROI as they help to identify the various inputs (costs) and outcomes / impacts (benefits) of an intervention.

Evidence on outcomes was gathered from a variety of sources including; qualitative work with Acacia staff, volunteers and mothers; quantitative outcome data provided by Acacia; existing literature; and, data on patients at the Birmingham mother and baby unit.
Three main outcomes were established for services users and included in the analysis: increased awareness of PND and PND support; improvements in mental health; and, increased ability to cope. Volunteers also experienced positive outcomes including improved satisfaction, increased understanding of PND and improved knowledge of techniques to support those affected by PND. There were also outcomes for health professionals and services. These included: increased awareness of / referrals to Acacia and reduced use of restorative health services.

Based on the evidence in existing literature, a number of long term impacts were also included in the analysis, including: reduced future mental health problems and better functioning families; improved outcomes for children; increased supply of labour to address PND; and, more appropriate service responses providing better value for money to the NHS.

Results of the Analysis

In addition to cash funding provided by the NHS and two local authority ward advisory boards, Acacia provides a significant level of inputs 'in-kind'. These contributions included the provision of venues free of charge or at subsidised rates. The value of this support was estimated at over £71,000. Acacia’s befriending service is also delivered by volunteers, who undertake a range of different tasks. The value of volunteers delivering the service was estimated at over £33,000.

The figure to the right shows that in-kind support accounted for a significant proportion of the inputs to the service. For every £1 invested by NHS BEN in the service, Acacia is able to leverage around £1.30 of additional resources.

Taking a broad ‘societal’ perspective, for every £1 invested, the estimated SROI generated by Acacia’s befriending service is:

- £3 over the short term;
- £4 over the medium term; and,
- £6.50 over the long term.

The results presented above show that the befriending service provides very good value for money.

The most accurate reflection of the return is provided by the longer term estimate (a return of £6.50 for every £1 invested), since it takes all benefits into account - including longer term impacts for children.

Finally, the model used to produce these estimates is stable (the results are not altered substantially by varying key assumptions) and conservative (the evidence connecting the service to the outcomes analysed is strong). Acacia and its commissioners can be confident that the befriending service is generating the value described in this report.
**Rationale for Intervention**

PND can be a debilitating condition. Depending upon the extremity of the condition, sufferers may struggle to cope with every day tasks and the quality of their relationships with their baby and other family members can suffer. PND has been shown to respond very well to treatment and psychosocial and psychological interventions have also been shown to be effective. There are few services providing this type of support, so Acacia provides a befriending service to women and their families experiencing PND.

**Broader contextual factors**

The economy is recovering from recession; insofar as poor economic conditions increase the incidence of PND the problem will grow. Public services are being cut, reducing support elsewhere; the NHS is also re-organising.
1 Introduction

This report provides an economic analysis of Acacia Family Support's befriending service. Acacia is a growing Christian charity. It was founded in 2004 by a group of mothers who had suffered from postnatal depression (PND). The group found that there was a lack of local support for families affected by PND; they therefore established Acacia to offer this support.

Demands are infinite; resources are finite. It is possible to dispute many of the insights from economics, but this one seems undeniable. This insight – referred to as the economic problem – is the starting point for all economic analysis. When applied to the allocation of public resources, the purpose of such analysis is to help work out how to achieve the greatest good for the resources available.

The demand for economic analysis is increasing. After the banking crisis and subsequent attempts to reduce the public deficit, those involved in the commissioning and provision of public services have shown a heightened interest in assessing value for money.

Yet the question of value for money is not well understood. Often it is confused with least cost, when the focus should really be on the value generated for a given investment. This basic framework – weighing costs and benefits – can be difficult to apply: especially when the benefits in question are 'intangible' or 'social' in nature. Nevertheless, there is a clear policy emphasis on valuing these goods and taking account of them in decisions concerned with resource allocation.

Various approaches are available to assess social value. Perhaps the best known – Social Return in Investment analysis (SROI) is a variant of cost-benefit analysis (CBA). SROI compares investments (costs) to returns (benefits). For both CBA and SROI, both costs and benefits are expressed in monetary terms. The challenge here is that benefits in social policy are often 'intangible' or 'social' (and non-market), yet some monetary valuation is required.

The main strengths of SROI are that it applies an economic framework to organisations and areas of service that have often neglected (perhaps even rejected) this way of thinking. In doing so, it introduces a series of useful concepts – chiefly in terms of thinking about the benefits achieved for a given level of investment. This can then be used to guide the conversation between funders and organisations providing services. Framing part of this conversation by monetising costs and benefits allows both parties to gain a fuller picture of the value of their activities. This also provides a way of describing and summarising benefits that may be especially compelling to some funders. The 'story' of the analysis, and the process of undertaking it, can also be valuable in itself: showing where value falls to particular groups of stakeholders for example.

1.1 Acacia wants to show the value of its work in economic terms

Acacia’s purpose is: “To improve the lives of mothers and their families affected by PND”. To achieve this, Acacia has three strategic aims, each of which is underpinned by more specific objectives:

1. To provide high quality, community-based support service to those affected by postnatal depression;

2. To raise awareness of postnatal depression amongst health professionals and members of the communities Acacia work in; and

3. To recruit and train local people to provide volunteer-led support services.

Acacia provides support to mothers with varied levels of need. While some mothers require a low level of support over a short period, others have complex needs and require intensive support for a much more substantial period of time. Acacia’s ethos ensures that service

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1 See, for example: the Public Services (Social Value) Act 2012; CLG’s (2011) Best Value Statutory Guidance; and the HMT’s Green and Magenta Books.
provision is built around the needs of women – through direct service provision, supported 
signposting and advocacy work. Staff see Acacia as ‘going the extra mile’ to ensure that a 
welcoming and hospitable environment is provided in which mothers feel safe, supported 
and ‘held’.

The core of Acacia’s service offer is a befriending service (described in more detail in section 
3). This offers a telephone helpline and one-to-one support at various community facilities, 
where a crèche and relaxation service is also available. Acacia also delivers a service aimed 
specifically at Dads; and cognitive behavioural therapy as part of the Improving Access to 
Psychological Therapy (IAPT) programme.

Acacia currently receives a substantial proportion of its funding from Birmingham East and 
North Primary Care Trust (BEN PCT). BEN, in common with other public sector 
commissioners, is reviewing its investments in the light of tightening restrictions on budgets. 
The key consideration here is value for money. Commissioners could invest their finite 
resources several times over across a very wide range of potentially valuable services. In 
order to make best use of their resources, commissioners need evidence of the relative 
costs and benefits of these potential services.

Therefore, in order to show current commissioners the value of their services – and to have 
a case for attracting other funding - providers such as Acacia must show that they provide 
good value relative to alternatives. This presents a strategic as well as a practical challenge 
to Acacia – especially given the proportion of its income accounted for by BEN’s 
investments.

In order to help address these challenges, Acacia applied for – and was successful in 
obtaining - funding from the Transition Fund, which is administered by the BIG Lottery and 
funded by the Cabinet Office. The Transition Fund was set up in order to assist established 
organisations who deliver valuable public services in adapting to new funding environments. 
It is available to organisations who are currently receiving over 60% of their funding from 
taxpayer funded sources. Part of Acacia’s use of the Fund is to provide robust evidence of 
the value of their service offer.

This report is a key input to Acacia’s ability to do so. It presents the results of a SROI 
analysis of Acacia’s befriending service and was produced by GHK, with the Third Sector 
Research Centre providing critical review. The analysis drew upon a range of evidence, 
including Acacia’s data, a brief review of the literature, and interviews with service users and 
volunteers. These sources have been brought together into the following sections:

- Section 2 provides a summary of evidence showing the nature and scale of the problems 
  associated with PND;
- Section 3 describes the befriending service (the subject of the analysis); it also contains 
  a summary of evidence relating to the effectiveness of treatments analogous to the 
  service;
- Section 4 presents the framework for the analysis;
- Section 5 gives the results from the application of the framework; and,
- Section 6 provides recommendations as to how the results might be communicated.

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2 BEN is part of the Birmingham and Solihull NHS Cluster. PCTs are scheduled for abolition in March 2013 to be 
replaced by Clinical Commissioning Groups. This report refers to the ‘PCT’ or ‘BEN’, but the essential points in 
relation to healthcare / public health commissioning remain the same regardless of institutional arrangements.

3 The criteria commissioners might use here vary (to the extent they are made explicit); the main trade-off is 
between ‘efficiency’ (buying the most health for the resources available) and ‘equity’ (being concerned with the 
distribution of that health, such that outcomes for the least well off are prioritised - even if less health is achieved 
in aggregate).
2 Postnatal depression: prevalence, causes and effects

This section provides a brief summary of the evidence on PND’s prevalence, causes and effects. This information is then carried forward into the framework for the analysis, in order to provide an evidence-base for later assumptions and measures.

2.1 PND can be a serious and debilitating condition

PND can be a debilitating condition. The symptoms are similar as for depression at other times (RC Psych, 2011); depending upon the extremity of the condition, sufferers may struggle to cope with everyday tasks and the quality of their relationships with their baby and other family members can suffer.

The term ‘depression’ refers to a wide range of mental health problems characterised by “the absence of a positive effect (a loss of interest and enjoyment in ordinary things and experience) low mood and a range of associated emotional cognitive, physical and behavioural symptoms” (NICE, 2009: p.13). The effects of PND are similar to depression (see box below); this analogy is important, as will be seen later in the report.

### Symptoms of depression

<table>
<thead>
<tr>
<th>Behavioural and physical symptoms:</th>
<th>Emotional symptoms:</th>
<th>Cognitive symptoms:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Tearfulness;</td>
<td>• Loss of interest and enjoyment in everyday life;</td>
<td>• Poor concentration;</td>
</tr>
<tr>
<td>• Irritability;</td>
<td>• Feelings of guilt and worthlessness;</td>
<td>• Pessimism;</td>
</tr>
<tr>
<td>• Social withdrawal;</td>
<td>• Low self esteem and loss of confidence;</td>
<td>• Recurring negative thoughts of oneself; and,</td>
</tr>
<tr>
<td>• Reduced sleep;</td>
<td>• Feeling helpless;</td>
<td>• Mental slowing.</td>
</tr>
<tr>
<td>• Exacerbation of existing pains;</td>
<td>• Thoughts of self harm and suicide; and,</td>
<td></td>
</tr>
<tr>
<td>• Increased muscle tension;</td>
<td>• In extreme cases attempts as self harm or suicide.</td>
<td></td>
</tr>
<tr>
<td>• Lowered appetite;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Lack of libido; and,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Fatigue.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: NICE (2009)

Approximately 13% (Dennis et al., 2009) of all new mothers have been found to suffer from PND. Less than 1% of women suffer the more serious condition of postpartum psychosis which usually requires very intensive treatment including support, medication and counselling (Dennis and Creedy, 2008).

There is a range of research evidence on the topic and many studies have been undertaken considering potential causes, risks, and treatments of PND. In 2007, NICE produced guidelines on clinical management and service guidance of antenatal and postnatal mental health. The guidance considers several mental health disorders that can occur during the antenatal, perinatal and postnatal periods and makes recommendations regarding each condition regarding effective identification, treatment and service management.

A systematic review used by NICE in the development of recommendations, found that women were more likely to experience PND if they have a history of severe mental illness including schizophrenia, bi-polar disorder, puerperal psychosis and severe prolonged depression in a previous postnatal period. Another review of psychosocial and psychological interventions aimed at preventing PND, carried out by Dennis and Creedy (2008) for the Cochrane Collaboration also identified risk factors. Studies included in the review suggested that women were more likely to experience PND if they:

- Are experiencing other stressful life events;

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*This is significant from the perspective of this analysis: the high grade of evidence available will allow a greater degree of confidence – e.g. on the effectiveness of the service – than is usually possible. We will therefore be able to rely less upon judgement (as is the more usual case in SROI) and more upon empirical work.*
• Are experiencing marital conflict;
• Lack social support; and
• Are a lone parent.

Despite increased knowledge around PND, less than half of cases are detected in routine primary care (Hendrick V, 2003), meaning that access to support is a key issue in this area.

2.2 PND has a range of negative impacts on families - and public services

In addition to the body of research setting out the causes and prevalence of PND, various studies have described PND’s negative effects on women and their families; for example:

• **PND harms the quality of family relationships.** It can cause mothers to experience insecure attachment with their child (Grace and Sansom, 2008; Dennis and Creedy, 2008) and lead to marital stress (Morrell et al., 2001). PND can affect fathers, increasing their rates of depression (Paulson et al, 2010).

• **PND can increase the use of restorative health services and lead to borderer costs.** Petrou et al. (2002) compared the cost of restorative health services provided to PND mothers to mothers not suffering the condition. The difference in service use between mothers who did not suffer PND and those that did was calculated at £392 over 18 months; this difference was found to be statistically significant (reducing the mathematical probability that this occurred by chance). The study concluded that the overall cost of PND to public services (predominantly primary care) is in the region of £34.4 - £43.3 million. These costs exclude the potential for wider costs to the family and society (through delayed / non return to work for example).

Lastly, increases in fathers’ rates of depression have also been traced through into increased use of healthcare; in a recent study (Edoka et al, 2011), fathers with depression incurred significantly higher care costs than fathers without postnatal depression (mean difference of around £130).

• **PND can lead to poor outcomes for children.** A mother’s experience of PND can have an impact on the future outcomes of the child (Sharp et al., 2010); for example:
  - Children have been found to be two to five times more likely to develop long-term behavioural problems; negative effects on cognitive development of children up to the age of 7 have been suggested. Reduced IQ in children at age 11 has also been found amongst children where mothers had depression in the early stages of the postnatal period (Huizink et al., 2003) (Van den Bergh et al., 2005) (Hay et al., 2001).
  - Murray et al. (2010) assessed the impact of PND on educational attainment of children at age 16. The study made use of longitudinal data using a cohort of children born in 1993 and found that boys whose mothers had suffered PND had poorer levels of educational attainment at GCSE. Boys born to mothers who suffer from PND are also at a greater risk of adapting poorly to school, often resulting in poor behaviour (Sinclair and Murray, 1998).
  - O’Conner et al.’s study (2003) found that boys were more likely to have developed behaviour problems at age four where their mothers had suffered PND.
  - Boys of mothers suffering from PND are more likely to develop conduct disorder during childhood. Again, the costs here can be substantive: between the ages 10 – 28, the costs incurred by the public sector for individuals diagnosed with conduct disorder are around £65,000 higher (Scott et al, 2001 – figure given in 1998 prices); taking a broader range of costs into account, the lifetime figure is around £225,000 (Friedli and Parsonage, 2007).

• **PND is correlated with future poor mental health.** Mothers who experience PND are twice as likely to suffer from depression in the following five years (Dennis and Creedy, 2008).
3 Description of the service to be analysed

Acacia delivers a range of services. These include support and advocacy services for men affected by PND, an Increasing Access to Psychological Therapies (IAPT) service focussed on PND, relationship support, and group sessions to equip mothers with strategies to reduce symptoms of anxiety and depression. A significant feature of Acacia’s work is the ability to offer a level of additional support and hospitality that goes beyond ‘mainstream’ provision. This support is in line with the ethos of Acacia as an organisation. Specifically, Acacia work to alleviate the barriers to engaging with services, providing free childcare at an onsite crèche and assistance with transportation costs. This type of support is rarely available to beneficiaries engaging with mainstream services. The analysis for this study focused on Acacia’s ‘befriending service’; this is because it is:

- **Acacia’s core service** (it is typical of the services provided);
- **A ‘mature’ service with good data** (the analysis can draw upon existing data, minimising the use of assumptions);
- **A seemingly well-studied** approach (allowing confidence in attributing outcomes to the intervention, and providing a solid empirical basis for any assumptions used); and,
- **Volunteer-led** (allowing an investigation of the value of a key aspect of voluntary sector organisations’ services).

In addition to this, Acacia plans to use the analysis to inform the development and scaling up of this service – including an assessment of the nature, scale and timing of the associated costs and benefits.

The befriending service has run for the last seven years, although it has expanded markedly over more recent years, using (commissioned) funding from BEN PCT. It is delivered by trained ‘befrienders’ - volunteers who provide regular one to one support to families accessing Acacia’s drop in service. The service works with women and families affected by PND.

Its **aims**, as given in the current Service Level Agreement, are to:

- Provide high quality, community-based support services to those affected by PND;
- Raise awareness of PND amongst health professionals and members of the communities Acacia works in; and,
- Recruit and train local people to provide volunteer-led support services.

Its **objectives** are to:

- Raise awareness of the effects of PND upon women and families;
- Reduce the stigma of PND;
- Provide a responsible and respected support service to which potential users are recommended by health professionals and community members;
- Support women and their families in the community with the unlikely event of needing secondary Mental Health care in the future;
- Support and reassure service users, mothers and family members, affected by symptoms associated with PND, helping them to understand their feelings, giving them support to cope with their situation, and to encourage and stimulate them through the healing process; and,
- To provide a holistic PND service.

The main **activities** of the service are:
Hospitality, ensuring that mothers accessing the service are comfortable and feel they are in a safe environment;

A resource library, offering literature about PND which beneficiaries are given access to as soon as they access the service. Literature is also immediately sent to mothers as soon as they are referred into the service;

Weekly post-natal support sessions (individual support sessions with a trained befriender that usually will last between 6 – 12 weeks but may be shortened or lengthened dependent on the service users need);

Telephone support;

Baby Massage Sessions;

Mothers’ aromatherapy and relaxation service;

School holiday family activity sessions;

Social events for recovered mums;

Baby bonding sessions; and,

Awareness raising work with professionals and related organisations to raise awareness of PND.

All of the activities are delivered by people who are trained in PND, ensuring that activities are appropriate for Acacia’s beneficiaries. The befriending service is delivered to beneficiaries by volunteers. Ongoing support is provided to volunteers including; supervision; training; and pastoral support. Recruitment of volunteers takes place in four main ways:

Through having previously accessed support and recovered from PND;

Through attendance at local churches;

Through word of mouth; and

Through ongoing recruitment in the local Birmingham press.

Infrastructure and support is provided by an Operations Manager, Business Manager and Centre Managers; they provide logistical support, as well as training / CRB checks, monitoring and evaluation, and administrative tasks.

In order to alleviate the barriers to engaging with services, Acacia provides free childcare at an onsite crèche and assistance with transportation costs. This is a distinguishing feature of the service that is not available for beneficiaries engaging with ‘mainstream’ primary care services. According their website, in the last year Acacia supported 459 parents and other family members; 230 of these beneficiaries were supported by the befriending service.

In terms of geographic coverage, the service operates in the electoral wards covered by BEN PCT: Sutton Four Oaks, Sutton Vessey, Oscott, Kingstanding, Sutton New Hall, Perry Barr, Stockland Green, Erdington, Kingsbury, Washwood Heath, Hodge Hill, Shard End, Yardley, Acocks Green, and Sheldon. Currently, the befriending services are run from three centres on the following days:

Mondays at Elim Church, Kingstanding;

Thursdays at St John’s Church, Walmley, Sutton Coldfield; and,

Fridays at Adderley Children’s Centre, Saltley.

Referrals into the service come from the helpline, self-referral, and professional referral. The Figures below show two pathways:

Figure 3.1 shows routes into and through services in the absence of Acacia (i.e. ‘usual’ treatment); and,
Figure 3.2 shows the pathway into and through Acacia services. Timing is also important within these pathways. Information provided by Acacia suggests that support from Acacia is provided immediately; whereas referral to primary care mental health teams within BEN PCT typically results in being placed on a 4 – 6 month waiting list and can often follow prescription of medication by a GP.

Figure 3.1  Care pathway through PCT services
The subsequent hope – from the perspective of the PCT, but most likely also service users – is that Acacia services will not only lead to better health outcomes for users, but also that it will reduce the need for more expensive services (such as those provided by Birmingham’s specialist mother-and-baby unit).

Acacia’s approach works to ensure that outcomes achieved by beneficiaries are then sustained in the future. This will be particularly important in the SROI analysis when considering the extent to which outcomes achieved are expected to last into the future. Following support delivered by the befriending service, beneficiaries are encouraged to access group work sessions led by a befriender. In order that mothers who have received support from the befriending service and the subsequent group work continue to be supported, Acacia have set up a community peer support group. This group is currently being established and will be comprised of mothers who have completed their course of support with Acacia and meet weekly in a local coffee shop, providing an informal network of peer support.

3.2 There is strong evidence that interventions similar to the befriending service are effective

Later in the report, the analysis must consider the outcomes resulting from Acacia’s services. This is a causal claim, which necessarily contains a series of methodological considerations. The ability to draw upon high-grade studies of analogous services bolsters confidence in these claims; notably, there is a Cochrane review in this area (Dennis and Creedy, 2008), which represents a grade of study not often available to SROI analysis.

What follows is a short summary of evidence describing the effectiveness of such studies. While exact analogies between the befriending service and the subjects of these studies are difficult to achieve, there is sufficient weight of evidence to provide confidence that the outcomes attributed to the befriending service (see section 4) are correct:

- PND has been shown to respond to treatment. Counselling and medication have been proven to be effective (NICE, 2007; Dennis and Creedy, 2008; Morrell et al. 2009).
Psychosocial and psychological interventions – of the type that Acacia provide – have also been shown to be effective (Dennis and Creedy, 2008; Morrell et al., 2009). It has been suggested that these types of interventions may have preventative qualities as they often address factors that make people more likely to experience the condition.

Telephone based peer support – of the type provided under the befriending service – have been cited as a key area for further research, having shown potentially positive impacts in small-scale studies (Dennis and Creedy, 2008).

Using mothers who have themselves experienced PND can have a positive effect on psychological wellbeing (Dennis et al., 2009).

Dennis’ (2010) analysis of a RCT of a psychological intervention delivered by volunteers, similar to Acacia’s befriending service, found that where volunteers are well trained and do not work to minimise problems that a mother experiences in an attempt to normalise the mother’s feelings they can: help to improve confidence of mothers; reduce feelings of isolation; and, provide coping strategies for the future.

Sharp et al.’s (2010) pragmatic randomised control trial (RCT) compared the effects of medication with community based psychosocial interventions. The study found that medication for depression was the most effective treatment for PND at 4 weeks. However, at 18 weeks there was not found to be a difference between those receiving medication and those receiving psychological therapy. Morrell et al. (2009) point out that levels of compliance with medication are poor and that relapse to depression after 18 months was higher among those using medication in comparison to psychological interventions.

Murray et al. (2003) conducted a RCT to compare the effectiveness of psychological treatments for PND, considering counselling, cognitive behaviour therapy (CBT) and psychodynamic therapy. Counselling services were found to be most effective in improving child outcomes at 18 months, including improvements in infant behaviour measured by maternal reports and independent observations. However, it was found that in order to sustain impacts, it was necessary for follow up intervention to be carried out beyond the 8 week period of the intervention.

In 2004 NICE produced an evidence briefing regarding home-visiting interventions providing psychological support to mothers effected by PND. The evidence review found that interventions were shown to lead to improvements in child behaviour, improved cognitive development of children and improved detection and management of PND.

Lastly, and accepting that the mode of delivery is different (i.e. is professional, rather than peer led) the role of trained health visitors is important; this is important in considering whether Acacia’s advocacy work may lead to more effective primary care.

Studies have also shown that early identification of PND and psychological interventions provided to mothers can sooner ameliorate impacts on the child and mother (Bauer et al., 2011; Morrell et al., 2009). A RCT was conducted by Morrell et al., (2009) which examined the effects of provision of psychologically informed interventions delivered by health visitors. The trial found that interventions were effective, with mothers being more likely to recover after three months when compared with the control group. Knapp et al. (2011) made use of Morrell et al.’s findings in estimating the cost per QALY (Quality Adjusted Life Year) of preventative screening for PND and early intervention. The study made use of a model based on a universal screening intervention delivered by health visitors alongside routine care after child birth. Where PND is not resolved, it is assumed that a psychologically informed session would be delivered by a health visitor. The incremental cost per QALY is estimated to be £4,500.

The QALY is a standard measure of health benefits that takes into account the quality and quantity of life lived. Cost per QALY is often used in health economics as a means of comparing the cost effectiveness of interventions.
The evidence presented above shows that interventions similar to Acacia’s befriending service are both effective and cost effective. Acacia’s approach works to encourage mothers to access the service at an early stage and to continue on a pathway of support. This section has shown that psychosocial interventions have been shown to have a similar effect after 18 weeks and a lower rate of relapse to depression at 18 months when compared with medication. Acacia have put measures in place that work limit potential barriers, such as the provision of a crèche and assistance with transport. This is a particular benefit of Acacia’s provision that would be beyond the scope of mainstream provision. The findings of the literature are built into our analysis when we consider the benefits and additionality offered by Acacia’s service in the subsequent sections of this report.
4 Framework for the analysis

This section provides a description of the framework used for the analysis. It begins by describing the perspective of the analysis and the timeframe used, before concluding with the identification of cost and benefits for inclusion.

4.1 The analysis takes the perspective of both ‘society’ and the state

It is important in the analysis to identify the perspective costs and benefits are being considered from. Are costs and benefits to be considered in the broadest sense, taking a full account of the full range of costs and benefits to society - or should a more narrow perspective be taken, perhaps considering the costs and benefits to public services? Changing this perspective can lead to radically different results.

In our analysis, we take two perspectives:

▪ That of society as a whole, considering all costs and benefits; and
▪ That of the state, in order to show the return on investment for that organisation alone.

Throughout the analysis, we specify where the costs and benefits fall by showing the relevant ‘stakeholders’ (see the Glossary to this report).

4.2 Benefits are considered over the short, medium and longer term

The time period for the analysis is a key parameter. The critical question here relates to the duration of costs and – perhaps more importantly – benefits. The main question when framing an analysis is: what is the appropriate period of analysis to appropriately account for the full range of benefits and costs? This is an important question in the case of PND. The literature suggests that some benefits – in terms of children’s outcomes especially – may be long-term. This needs to be addressed in the analysis, all the time considering the strength of the implied causal chains.

In this analysis we have analysed costs for one year, before looking at the benefits derived from the year of activity funded. This is because benefits will last over time / will only come about at a later date. We used three time periods, to enable the tracking benefits fall over time:

▪ Short-term – defined as a three year period;
▪ Medium-term – six years; and,
▪ Long-term – 30 years.

Shorter time periods allow for a higher degree of certainty that outcomes occur and it is reasonable to assume that the core outcomes identified in the analysis would occur within that time period. The high quality of existing evidence in relation to the effects of PND allows for a reasonable level of certainty regarding the long term effects of Acacia’s service. This has allowed us to consider a longer time period of 30 years, in particularly taking children’s outcomes into account (e.g. in relation to assumed reductions in conduct disorder).

We have also made assumptions about the degree to which benefits ‘decay’ – i.e. how far benefits remain once the activities of the service have stopped / how far they drop-off. We explain the rationale for each of the assumptions used in Table 5.6. Lastly, we have accounted for the changing value of money over time (£1 today is worth more than £1 in five years). This is done using the Treasury’s recommended discount rate of 3.5%.

4.3 Costs and benefits were identified using a logic model

Creating a list of all of the relevant benefits and costs for the service is a key step in a SROI analysis. In order to do this, we produced a logic model. Such models are useful in SROI as they help to identify the various inputs (costs) and outcomes / impacts (benefits) of an intervention. The process of establishing a logic model is also helpful in identifying why
activities take place, allowing projects to see how the work they do will lead to outcomes and impacts in the future. This is shown in Figure 4.3 below:

**Figure 4.3  Logic models as the basis for economic analysis**

In our analysis, we produced a logic model for Acacia’s befriending service. This was based on our understanding of the service, gained from meetings with Acacia staff and reviews of service documentation. Acacia’s monitoring and evaluation framework was a further key source, as were interviews with volunteers and beneficiaries. The result is shown at Figure 4.4
An economic analysis of Acacia Family Support’s befriending service

Figure 4.4  The logic model frames the analysis by defining costs (inputs) and benefits (outcomes and impacts)

**Rationale for Intervention**

PND can be a debilitating condition. Depending upon the extremity of the condition, sufferers may struggle to cope with everyday tasks and the quality of their relationships with their baby and other family members can suffer. PND has been shown to respond very well to treatment and psychosocial and psychological interventions have also been shown to be effective. There are few services providing this type of support, so Acacia provides a befriending service to women and their families experiencing PND.

**Inputs**

- **Cash Funding:**
  - NHS BEN
  - Sutton New Hall Ward Advisory Board
  - Four Oaks Advisory Board
  - Acacia voluntary funding

- **In-Kind Contributions:**
  - Volunteer time
  - Venues given at reduced cost / for free
  - Trustee time

**Activities**

- Provide community-based services directly to women and families affected by PND
- Recruit and train volunteers to provide services e.g.: providing accredited training; yearly training courses and pastoral support
- Engage with health professionals / other services to raise awareness and increase referrals

**Short-term Outcomes**

- **Beneficiaries:**
  - Increased awareness of PND / support
- **Volunteers:**
  - Improved satisfaction
  - Increased understanding of PND and knowledge of techniques to support beneficiaries
- **Health professionals / services:**
  - Increased understanding of PND / referrals to Acacia services

**Medium-term Outcomes**

- **Beneficiaries:**
  - Improved mental health
  - Increased ability to cope
  - Improved family relationships
- **Volunteers:**
  - Improved skills
  - Progress onto other training
- **Health professionals / services:**
  - Reduced use of restorative health services
  - Improved ability to diagnose / treat PND

**Long-term Impacts**

- Reduced mental health problems and better functioning families
- Improved outcomes for children: reduced behavioural problems improved educational attainment
- Increased supply of labour to address PND
- More appropriate service response - better value for money for the NHS

**Broader contextual factors**

The economy is recovering from recession; insofar as poor economic conditions increase the incidence of PND the problem will grow. Public services are being cut, reducing support elsewhere; the NHS is also re-organising.
4.4 Evidence on outcomes was gathered from various sources

Our analysis separates out outcomes that occur in the short, medium and long term. The befriending service achieves a wide variety of outcomes for beneficiaries, volunteers, health professionals / services. The outcomes included in the logic model above represent a core set of outcomes identified through:

- Qualitative work with Acacia staff, volunteers and mothers;
- Quantitative outcome data provided by Acacia;
- Literature on the effectiveness of services analogous to the befriending service;
- Information gained from meetings with Acacia;
- Data on admissions to mother and baby units in the Birmingham area; and,
- Interviews with families, volunteers and staff.

This evidence is summarised below, beginning with evidence on outcomes for service users, moving onto volunteers and ending with a discussion of outcomes for health professionals and health services.

4.4.1 There were three main outcomes for service users

1) Increased awareness of PND and PND support

Acacia staff, volunteers and mothers who benefited from the service all stated that Acacia provides information regarding PND. Data from exit evaluation forms\(^6\) from the befriending service were provided by Acacia. 62% of all service users stated that they strongly agreed that they had gained a better understanding of PND, whilst 31% stated that they agreed. No respondents stated that they disagreed with the statement.

2) Improvements in mental health

It was reported that immediate support was an important aspect in improving women’s mental health where it would have deteriorated whilst waiting to access NHS services. One mother reported that the immediate help provided by Acacia’s befriending service helped in the relief of her symptoms at an early stage while she was awaiting higher level support from NHS BEN’s mother and baby unit.

Acacia make use of the short Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) in measuring outcomes for mothers accessing the befriending service at the point they enter and leave the service. The short WEMWBS requires participants to rate seven statements according to their experience over the last two weeks and is scored out of 35, with lower values indicating poorer mental wellbeing.

Analysis of data provided by Acacia for 39 mothers where before and after data were available was undertaken. The analysis calculated the statistical significance of changes in reported scores. Statistically significant results indicate that there is a low probability that the change occurred by chance. The mean difference in score between a mother entering and leaving the service was an increase of 11.8 points. The table below provides a summary of the change in score reported for each of the seven questions; it shows that all changes were determined to be statistically significant\(^7\).

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\(^6\) Exit evaluation forms are paper based and completed by mothers as they conclude their support

\(^7\) T-tests were used to test statistical significance.
An economic analysis of Acacia Family Support’s befriending service

Table 4.1  Changes in WEMWBS scores showed statistically significant increases

<table>
<thead>
<tr>
<th>Question</th>
<th>Change in score</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>I’ve been feeling optimistic about the future</td>
<td>+2</td>
<td>Significant</td>
</tr>
<tr>
<td>I’ve been feeling useful</td>
<td>+1.75</td>
<td>Significant</td>
</tr>
<tr>
<td>I’ve been feeling relaxed</td>
<td>+1.85</td>
<td>Significant</td>
</tr>
<tr>
<td>I’ve been dealing with problems well</td>
<td>+1.5</td>
<td>Significant</td>
</tr>
<tr>
<td>I’ve been thinking clearly</td>
<td>+1.2</td>
<td>Significant</td>
</tr>
<tr>
<td>I’ve been feeling close to other people</td>
<td>+0.89</td>
<td>Significant</td>
</tr>
<tr>
<td>I’ve been able to make up my own mind about things</td>
<td>+1.5</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Data from exit evaluation forms provided also indicated that mothers using the service experienced reduced feelings of isolation. 85% of mothers stated that they strongly agreed with the statement “I feel more supported”, 8% agreed and the remaining 7% neither agreed or disagreed. In addition, 31% strongly agreed that they had made friends through their involvement with Acacia, 38% stated that they agreed.

Respondents in qualitative interviews reported meeting up with other parents and feeling more supported.

“They were always at the end of the phone, and if I had a particularly bad day they would call to see if I was OK”.

One mother reported that she had changed the church she attended after accessing Acacia. She reported that more families attended St John’s and that she had improved her sense of belonging to the community and felt: “part of the church family”.

The qualitative evidence also showed examples where Acacia’s support had led to improved outcomes where users had more extreme needs. This was particularly the case where mothers in crisis required emergency support:

Acacia prevented ‘Jo’ sleeping rough following the birth of her baby

‘Jo’ approached Acacia when 20 weeks pregnant. She was very isolated and had little support. Following the birth of her baby Jo was discharged from hospital, without a house to go to and after having her baby taken into local authority care. It was expected that Jo would attend a child protection meeting on the same day and represent herself. She took part in the meeting despite suffering from severe postnatal pains and was then asked to leave the building at 5.30pm and told she would have to remain homeless until emergency housing were able to find her hostel accommodation. As she was not considered to be the carer of her child she did not qualify under the Priority Need homeless category, exempting the local authority from statutory obligation to provide housing. Statutory services had closed for the day and Jo did not know what to do.

Acacia ensured that Jo did not have to sleep rough, supporting her to access emergency accommodation that night. Acacia have also advocated to the local authority on behalf of Jo, having her child returned to her and provided a food parcel and second hand baby equipment.

3) Increased ability to cope

The befriending service provides mothers with strategies and practical steps in order to better cope with the effects of PND. 69% of those that responded to the exit evaluation forms reported that they strongly agreed that they were more able to cope with their feelings, 29 agreed with the statement and 2% neither agreed or disagreed. Again, these findings were supported by evidence provided in qualitative interviews. All the mothers that we spoke to stated that Acacia had provided practical activities or strategies that had helped to improve their ability to cope. In addition, all volunteers that we spoke to reported that their role
involved providing advice and practical steps to assist mothers in coping with their feelings. Mothers reported:

“It’s been a fantastic service all round, they offered me help and practical things to do.”

“It had panic attacks as well and they gave me coping mechanisms”

“It changed how I could cope on a day to day basis”

Being equipped with techniques and approaches to aid coping in the longer term is a key factor later in the analysis, where assumptions are made about the durability of improvements in mental health (are they ‘one off’ or more lasting?)

Interviewees often linked their improved ability to cope with an improvement in family relationships. It was reported that the support of the befriending service had helped couples to develop an improved understanding of how one another had been affected by PND. For example, one mother reported that the support of Acacia had helped her to understand how her experience of the condition had impacted upon her husband. Another mother reported that the support of the befriending service had enabled her to better communicate with her husband in order that he could better understand how the condition affected her.

This was also commonly reported in data from exit evaluation forms: 61% of mothers reported that they strongly agreed that they had an improved relationship with their baby following involvement with Acacia, 19% agreed and the remaining 8% neither agreed or disagreed. 54% of respondents to the exit forms strongly agreed that their relationship with their partner had improved.

4.4.2 Volunteer outcomes related to life satisfaction, knowledge and skills

Outcomes for volunteers included improved satisfaction, increased understanding of PND and improved knowledge of techniques to support those affected by PND

1) Improved satisfaction

It was frequently stated by volunteers that contributing to the work of Acacia (through working in the crèche or delivering befriending) was something they were proud of and found satisfying. Volunteers reported that by volunteering with Acacia they were making a positive contribution to the community and felt they were making substantial differences to other families.

“It’s what your actually giving back to society and seeing these women who are so desperate and how they are and that you’ve actually helped them, that you have helped that family”

2) Increased understanding of PND and knowledge of techniques to support beneficiaries

One volunteer described how the training had benefited her – allowing her to gain a greater understanding of the condition and recognise that she herself had mild symptoms before becoming a volunteer

Acacia deliver training to volunteers to help them to provide an informed intervention for mothers. In addition to increasing understanding of PND, it also provides examples of coping strategies that can be used to support those affected by PND.

3) Improved skills and progress into employment

Volunteers reported that they had gained skills through their role at Acacia. In particular certification in first aid and the development of transferrable skills for roles in careers such as counselling were stated as being of benefit in qualitative interviews with beneficiaries.

Two of the volunteers that we spoke to had progressed into paid roles with Acacia following training or experience volunteering. One volunteer described that after having had two children she had been exploring the possibility of volunteering in the community. She was drawn to Acacia due to her previous professional background of working with people suffering from depression. Having gained further experience as a befriender with Acacia she was able to become a paid member of staff as the charity grew. Another described how she
had trained in order to become a volunteer and had been successful in her application to Acacia immediately after completing her course of training.

**Our approach to the costs and benefits of volunteers**

There is debate as to how volunteers should be treated within SROI analysis. They are an input (cost) that has associated outcomes (to them, but also to service users).

Our approach is to assume that the benefits volunteers derive to themselves are equal to the costs they incur in time. This is based on the assumption that the volunteer is: a) able to give more time should they wish, and b) rational, such that if they could give more time (and therefore get more benefit) then they would.

The implication for the analysis is to ensure that the value of volunteers’ outcomes is equal to their inputs; later in the report we describe our approach ensuring this is the case.

**4.4.3 Outcomes for professionals / health services related to increased awareness of PND – as well as reduced use of ‘restorative’ services**

There were two main outcomes for health professionals and services:

1) **Increased awareness of / referrals to Acacia services**

Acacia is a well known service in the local area; referrals are made by a variety of health professionals. The increased awareness of Acacia services allows for the provision of immediate support. One mother stated that Acacia’s ability to provide immediate support was cited by her GP as an important advantage of the service.

There were a range of referral routes to Acacia reported in qualitative interviews including referrals through friends, posters in church and commonly through health professionals. Mothers reported being referred to the service by GPs and in one case a health visitor. In addition, where referrals had not been made by GPs it was stated that mother advocated and recommended the service. All of the participants in qualitative interviews stated that they had recommended the service to a friend. One mother reported recommending the service to the GP, with the service subsequently being advertised in the practice.

2) **Reduced use of restorative mental health services**

Evidence from the literature suggests that early intervention to address PND can lead to reduced use of restorative services (Knapp et al., 2011; Petrou et al., 2002). Interviews with mothers found that in some cases use of restorative services, alongside the support from Acacia continued. For example, mothers who had been referred to the service by the GP continued to take anti-depressants in addition to engaging in support from Acacia. However, it was also reported that the duration of depression was shorter than would otherwise have been the case. One mother reported that following the birth of her first child she had not benefitted from the support of Acacia and had been treated for PND exclusively with anti-depressants. She found that following the birth of her second child and with the support of Acacia she was able to withdraw from medication at a much earlier stage than previously.

Data provided by the NHS suggests that Acacia had contributed to reductions in referrals to the mother and baby unit. Data was available following a freedom of information request made by Acacia regarding outpatients seen by the mother and baby unit in Birmingham. The data, presented in Figure 4.5 below, show that since Acacia began service delivery in 2004, outpatients at the mother and baby unit from South Birmingham and Heart of Birmingham (HoB) have increased at rate of around 10 patients per year. Over the same time period, admissions from NHS BEN have remained relatively constant. Acacia does not operate within either HoB or South Birmingham and it was reported in qualitative interviews that Acacia was a unique service, not provided elsewhere in the city.

It was reported by one mother who accessed the befriending service that she had conducted considerable research into the availability of services that support women and their families through PND and Acacia was the only specialist service available. One volunteer reported that Acacia had received a number of enquiries from parents in South Birmingham about the
availability of the service as there was no comparable service in the area. While far from being definitive, combining these different sources of evidence (literature, data, interviews) does suggest that the befriending service is affecting admissions.

Figure 4.5 Outpatient attendance at the mother and baby unit has risen in other areas of Birmingham - but remained steady where Acacia operates

4.5 Long-term impacts were more challenging to measure

Impacts represent the long term improvements contributed to by the befriending service. These are more difficult to measure accurately, as they may occur long after support has ended. However, where there is evidence that outcomes are successfully achieved, there is a logical expectation of some long term impact in the future. In the case of Acacia’s befriending service there is also very good evidence relating particularly to reduced behavioural problems in children and improved educational attainment.

The expected broad impacts of Acacia’s befriending service include:

- Reduced mental health problems and better functioning families;
- Improved outcomes for children: reduced behavioural problems improved educational attainment;
- Increased supply of labour to address PND; and,
- More appropriate service response - better value for money for the NHS.

The quality of evidence linking reductions in PND to better outcomes of children means that this impact can be included in the analysis; this is presented in the following section.
5 Results of the analysis

This section presents the results derived from the application of the framework presented previously. It describes the costs and benefits of the befriending service in turn, before concluding with a comparison of them.

5.1 Costs associated with the service – cash and in-kind - were estimated for a single year

There are two main types of input: cash and in-kind.

The total value of cash inputs is around £105,500

Cash funding was provided by NHS BEN, Sutton New Hall Ward Advisory Ward, Four Oaks Advisory Board and voluntary donations

- NHS Birmingham East and North – £92,030
- Sutton New Hall Ward Advisory Board - £4,000
- Four Oaks Advisory Board - £2,346
- Voluntary funding (donations to Acacia) - £7,164.

Acacia also leverage substantial in-kind contributions – in volunteer time, trustee time and subsidised / free venue hire. These contributions allow the befriending service to be provided – Acacia thereby adds value beyond the cash funding provided by the state. Data provided by Acacia has also allowed the analysis to provide estimates on the level of in-kind costs associated with the service.

The provision of subsidised and free venues was valued at around £71,420; volunteer time at £33,600

The service makes use of three venues, two of which are provided ‘free’ to Acacia and one provided at a heavily subsidised rate. The rates were calculated as follows:

- St John’s Church is used for one hour per week over 42 weeks of the year and provided at a subsidised rate of £2,100 per year. The market rate for use of the Church and its facilities is £309 per hour. The in-kind value is found by multiplying the number of hours the church is used for over the year (42) by the hourly rate (£309) and subtracting the subsidised rate paid by Acacia (£2,100). This provides a valuation of £10,878.

- Elim Church in Kingstanding provides use of two rooms free of charge to Acacia for one hour per week over 42 weeks of the year. The market rate for each room is £40 per hour. This provides a valuation of £3,360.

- Adderley Children’s Centre provides a venue free of charge for one day each week over 42 weeks per year. It was not possible to determine a market rate for this venue, so the analysis has made use of the mean average hourly value of the two venues for which rates were available. This hourly rate was then costed over a full day each week for 42 weeks per year. This provides a valuation of £57,183.

The analysis recognises that volunteers perform a variety of tasks and has taken the approach of establishing what Acacia would otherwise have to pay for the delivery of these tasks by a paid member of staff rather than a volunteer. Valuations for volunteer time are presented in Table 5.2 below. The total value of all volunteer time was £33,585. The total value of volunteer time excluding the time donated by trustees was £32,433.
An economic analysis of Acacia Family Support’s befriending service

Table 5.2  The total value of volunteer time was £33,585

<table>
<thead>
<tr>
<th>Role</th>
<th>Description of role</th>
<th>Number of volunteers and time input</th>
<th>Comparator</th>
<th>Estimated value of volunteer time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Befriender</td>
<td>A befriender will support the service user by listening, encouraging and reassuring them through their illness. Where appropriate a befriender will signpost the service user to other agencies for specialised support in areas outside of postnatal depression, or will refer them for Cognitive Behavioural Therapy through one of the Acacia Therapists.</td>
<td>16 befrienders volunteer for 3 hours per week over 35 weeks of the year</td>
<td>Employing a non clinical psychological therapist trainee on the NHS at the bottom of Band 5 would cost £21,176 per annum.</td>
<td>£18,244</td>
</tr>
<tr>
<td>Senior Befriender</td>
<td>As above. In addition a senior befriender will have at least 12 months experience and/or may have counselling skills/qualifications. A senior befriender would be required to deal with the more complex cases that require more skill, sensitivity and knowledge.</td>
<td>1 senior befriender volunteers for 3 hours per week over 35 weeks of the year</td>
<td>Employing a non clinical psychological therapist on the NHS at the bottom of Band 6 would cost £25,528</td>
<td>£1,375</td>
</tr>
<tr>
<td>Crèche Worker</td>
<td>A crèche worker would be responsible for caring for pre-school age children in a crèche</td>
<td>8 crèche workers volunteer for 3 hours per week over 35 weeks of the year</td>
<td>Employing a Nursery Nurse Assistant on the NHS would cost £13,903</td>
<td>£8,983</td>
</tr>
<tr>
<td>Hospitality Support</td>
<td>To provide refreshments including tea, coffee, cold drinks, biscuits to service users, staff, volunteers and visitors before and during each session, and to clean and tidy away at the end of each session.</td>
<td>2 hospitality support workers volunteer for 3 hours per week over 35 weeks of the year</td>
<td>This support is vital and delivered to a high standard. However in being conservative in our judgement we have used the minimum wage of £6.08 per hour in valuing this task</td>
<td>£3,830</td>
</tr>
<tr>
<td>Trustee</td>
<td>Trustees provide time, strategic oversight and specific expertise to assist the high level management of Acacia</td>
<td>8 trustees meet 6 times per year. Each meeting is around 3 hours long. Acacia have estimated that around 60% of the time is spent discussing the befriending service</td>
<td>Based on a median salary in the UK for 2011 of £26,000.</td>
<td>£1,152</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>£33,585</strong></td>
</tr>
</tbody>
</table>
An economic analysis of Acacia Family Support’s befriending service

Figure 5.6 below shows the level of cost met by various stakeholders. NHS BEN is the biggest contributor, providing 44% of all inputs through cash funding. Acacia was able to leverage almost £118,516 of additional inputs (in cash and in kind). This analysis shows that for every £1 NHS BEN invests in the service, Acacia is able to leverage around £1.30 of additional resource.

Figure 5.6  Funding from NHS BEN provides 44% of inputs

For the remainder of the analysis, the costs associated with volunteers are left aside – as are the benefits. This is on the assumption that the costs and benefits to the volunteers are equal (see green box on p.16).

5.2 Benefits were measured and valued over time and for different stakeholders

Using the framework provided by the logic model, and the evidence gathered against that framework, a set of outcomes for inclusion in the analysis were defined. These outcomes fall to various stakeholders, as is set out in Table 5.3.

Each outcome has an indicator which allows us to look up how many people are likely to have gained that outcome. This allows us to assign, at a later stage, a total value per year, for each outcome. The rationale for including each outcome is given in the tables below. Outcomes that were included in the SROI are shown in bold; those that were excluded are shown in normal text. Insofar as outcomes have been excluded (most often for want of a suitable means of measuring them), then the results of the analysis will tend towards underestimation of the value of the befriending service.
An economic analysis of Acacia Family Support’s befriending service

Table 5.3  Outcomes were matched with indicators

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Outcome</th>
<th>Indicator</th>
<th>Rationale for inclusion / exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short Term Outcomes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Families</td>
<td>Increased awareness of PND / support</td>
<td></td>
<td>Though this outcome is considered to be important it was not possible to identify a plausible financial valuation.</td>
</tr>
<tr>
<td>Volunteers</td>
<td>Increased understanding of PND</td>
<td></td>
<td>It is assumed that the benefits accrued by volunteers are approximately equal to the time that they input; they are therefore excluded from the analysis.</td>
</tr>
<tr>
<td>Volunteers</td>
<td>Improved knowledge of techniques to support those affected by PND</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health professionals</td>
<td>Increased understanding of PND / awareness of Acacia services</td>
<td>Reduced professional time researching treatment / services</td>
<td>It is assumed that increased awareness of Acacia among health professionals reduces the amount of time needed for researching services and treatments for PND. In our sensitivity analysis we will assess the effect to which excluding this benefit impacts upon the result.</td>
</tr>
<tr>
<td><strong>Medium Term Outcomes</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Families</td>
<td>Improved mental health</td>
<td>Improved mental wellbeing</td>
<td>Data from WEMWBS and from qualitative interviews strongly indicated that there were improvements in mental wellbeing.</td>
</tr>
<tr>
<td>Families</td>
<td>Improved ability to cope</td>
<td></td>
<td>This outcome is used in order to inform assumptions regarding the extent to which mental health outcomes are sustained into the future – insofar as there is evidence that families have an increased ability to cope, then we expect benefits to be lasting.</td>
</tr>
<tr>
<td>Volunteers</td>
<td>Improved skills</td>
<td></td>
<td>See above in relation to volunteers.</td>
</tr>
<tr>
<td>Volunteers</td>
<td>Progress onto other training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State</td>
<td>Reduced use of restorative health services</td>
<td>Reduced number of mothers and children accessing restorative health services</td>
<td>Based on findings from the literature (Knapp et al 2011; Petrou et al., 2002; Morrell et al., 2009) we can be highly confident that reductions in PND lead to reductions in use of restorative health services. In addition numbers of outpatients seen in NHS BEN by mother and baby units have remained steady over recent years when compared to NHS South Birmingham and HOB.</td>
</tr>
<tr>
<td>Health professionals</td>
<td>Improved ability to diagnose PND</td>
<td></td>
<td>We did not speak directly with health professionals working with Acacia. In being conservative we have excluded this outcome from the analysis.</td>
</tr>
<tr>
<td>Health professionals</td>
<td>Increased referrals to Acacia</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In addition to the outcomes identified in the table above it was also possible, based on findings from the literature, existing monitoring data, and qualitative fieldwork to include three longer term impacts in the analysis. It was found in the literature that reducing the duration of PND can lessen the harmful effects experience in later life by the child (Bauer et al., 2011; Morrell et al., 2009), selected benefits in this area are therefore included.

Murray et al. (2003) found that interventions that reduce the duration of suffering from PND were effective in improving infant behaviour. Therefore, reduced behaviour problems in children are included, using reduced behaviour problems among boys during the early years of schooling as an indicator. Evidence presented previously in the report shows that there is also an increased risk among boys of mothers with PND developing conduct disorder. This has therefore been included in the analysis.

NICE's (2004) evidence review found that psychological interventions had been proven to improve cognitive function among children. In the examination of existing research, it was established that children of mothers with PND have poorer levels of cognitive development at age 7, lower levels of IQ at age 11 and boys have poorer educational attainment at age 16 (Morrell et al., 2010). Improved educational attainment of children at age 16 has been included in the analysis when considering a 30 year time period, using increased attainment at GCSE as an indicator.

Respondents to the exit evaluation form reported improvements in their relationship with their partner. This finding was strengthened in qualitative interviews with service users. Therefore we have included improvements in family functioning in the analysis.

5.2.2 Financial ‘proxies’ were used to value outcomes

Table 5.4 shows why the monetary values for each outcome were chosen, and the calculations for the number of times that each benefit occurred in each year.

Much of Acacia’s work is preventative, intervening early to ensure that conditions do not deteriorate to the point that the use of more expensive and intensive services becomes necessary. In attempting to value the reduced use of outpatient services at the mother and baby unit we have valued three levels of service:

- Low intensity – a one hour appointment with a psychiatrist every week for seven weeks;
- Medium intensity – a one hour appointment with a psychiatrist and one visit per week from a Community Psychiatric Nurse (CPN) every week for seven weeks; and,
- High intensity - a one hour appointment with a psychiatrist, one visit per week from a Community Psychiatric Nurse (CPN) and attendance at a group day care appointment every week for seven weeks;

As was identified in section 4.4.3, the number of mothers seen as outpatients at the mother and baby clinic from NHS BEN has remained steady, whilst other areas of Birmingham have experienced increases. Based on conversation with Acacia staff, it is assumed in the analysis that the most commonly avoided level of treatment due to Acacia’s early intervention is low intensity (5 outpatients). Medium (3 outpatients) and high (2 outpatients) intensity treatments are assumed to be avoided for fewer mothers.

The most challenging outcome to value is the improved mental wellbeing of the mother. Yet, despite the difficulties inherent in this task, it is central: this is the primary outcome of the befriending service; improved mental health is valuable in its own right and this should be reflected in the analysis. There are a range of approaches to monetising social outcomes; each has their strengths and weaknesses. Moreover, there is a lack of literature focused on PND, adding to the problems associated with ‘benefits transfer’ (taking values from one context and applying to another). By way of examples:

---

8 All figures converted across currency but not time.
An economic analysis of Acacia Family Support’s befriending service

- Using a ‘cost of illness’ approach, a Swedish study Sobocki, P (2006) gave the cost to treat a depressive episode in primary care as being around £4,800; McDaid, D et al (2008) costed mental health problems to each European household at around £1,800 a year;

- Using a ‘willingness to pay’ approach, (Unutzer et al, 2003) suggested that depressed patients were willing to pay an average of £1,000 for a 6-month treatment that eliminates all symptoms of depression;

- Using various approaches (cost of illness, human capital approach), Lynch, J et al (2003) valued the following selected benefits associated with a community-based PND programme in the US (values rounded to nearest £100):
  - Reduction in depression treatment - £11,400; and,
  - Enhanced productivity at workplace - £15,400.

One key issue in this undertaking is to note that the costs of poor mental health should not be measured exclusively through the lens of the cost to public services. Work done by the Centre for Mental Health and others have shown that lost output (through reduced productivity) and ‘human costs’ (the negative impact on quality of life) should also be taken into account. A recent review by the Scottish Association for Mental Health suggested that in looking at the overall costs of poor mental health: service costs accounted for around 20% of the total; lost output for 30%; and human costs 50%. Taking the figure for the increased service costs associated with PND (£392 from Petrou et al, 2002) and applying these ratios would give an overall figure of around £2,200.

<table>
<thead>
<tr>
<th></th>
<th>%</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Care costs</td>
<td>18%</td>
<td>£392</td>
</tr>
<tr>
<td>Output losses</td>
<td>52%</td>
<td>£1,132</td>
</tr>
<tr>
<td>Human costs</td>
<td>30%</td>
<td>£653</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>£2,178</td>
</tr>
</tbody>
</table>

Doing the same for fathers (using service costs from Edoka et al, 2011) gives a total of around £720.

- Lastly, and drawing on more experimental literature, Gardner and Oswald (2006) examine the effect of cash windfalls on mental health. They found that a win of around £2,000 is associated with an improvement in mental health of 1.4 points as measured on the General Health Questionnaire (GHQ) – and that this lasts around two years. The GHQ is a 36 point scale; the SWEMWBS used by Acacia is a 35 point scale – meaning that they are broadly comparable. The scale of improvement typically seen following the befriending service is around 11 points – a far larger increase than for the £2,000 win.

Applying some judgement to the evidence presented above suggests that a valuation of around £2,000 per case of improved mental wellbeing seems appropriate. This is presented as a ‘GHK estimate’, but is based upon the evidence summarised above.
Table 5.4  Outcomes were valued monetarily

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Indicator</th>
<th>Unit value of benefit</th>
<th>Source of financial proxy</th>
<th>Explanation</th>
<th>Occurrences of the benefit each year</th>
<th>Explanation</th>
<th>Gross value of benefit per annum (£, approx)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased understanding of PND / awareness of Acacia services</td>
<td>Reduced professional time researching treatment / services</td>
<td>£21</td>
<td>Curtis, L. (2011) Unit Costs of Health and Social Care 2011</td>
<td>One minute of GP time is calculated to cost £2.10. The value assumes 10 minutes of GP time spent researching services for PND is saved by the GP being aware of Acacia</td>
<td>15</td>
<td>Assuming that GPs spend an extra 10 minutes researching services for 15 patients. It is noted that GP referrals account for many more than 15 patients but it is assumed that research into services would only have to be carried out for the first referral made by a GP.</td>
<td>£315</td>
</tr>
<tr>
<td>Improved mental health</td>
<td>Improved mental wellbeing</td>
<td>£2,000</td>
<td>GHK Estimate</td>
<td>See above</td>
<td>120</td>
<td>The number of occurrences is based on improvements in mental wellbeing as reported by WEMWBS. 35 out of 39 women reported an improvement. Scaling up to the number of women accessing the service in a year (134) it is estimated that 120 women would experience an improvement in mental health</td>
<td>£240,513</td>
</tr>
<tr>
<td>Reduced use of primary care services</td>
<td>Reduced number of mothers and children accessing restorative health services</td>
<td>£355</td>
<td>Petrou, S. et al. (2002) Economic costs of post-natal depression in a high-risk British cohort. British Journal of Psychiatry, vol. 181 pp. 505 – 512</td>
<td>Difference in the cost of health services used by a mother with PND compared to a mother without the condition. The value has been uprated to take account of inflation.</td>
<td>24</td>
<td>Of 39 women that completed WEMWBS 35 reported a positive change. Applying this ratio to the number of service users per year would indicate 120 mothers experienced a significant positive change. However, it was also reported by mother that they did continue to make use of restorative health services. We have taken the conservative assumption that 20% of the 120 mothers that could be</td>
<td>£8,571</td>
</tr>
</tbody>
</table>
An economic analysis of Acacia Family Support’s befriending service

| Reduced use of secondary care services | £1,000 | GHK Estimate | The unit cost of a psychiatrist providing a one hour consultation according to Learmonth (2010) is £143. We have assumed 7 weeks of psychiatric treatment provided once per week. | £5,000 |
| Reduced number of mothers and children accessing restorative health services | £1,504 | GHK Estimate (as above); and, DH (2008) *The Cost of Alcohol Harm to the NHS in England* | This proxy is the cost of delivering a one hour consultation with a psychiatrist and a weekly visit provided by a CPN (£72 per visit). | £4,512 |
| Reduced behaviour problems in children | £2,652 | GHK Estimate (as above); DH (2008); and, Curtis, L. (2011) *Unit Costs of Health and Social Care 2011* | This proxy is the cost of delivering a one hour consultation with a psychiatrist; a weekly visit provided by a CPN and attendance at a group day care appointment (£164 per appointment). | £5,304 |
| Reduced behaviour problems among boys during the early years of schooling | £2,000 | DfE Family Savings Calculator | This proxy is the cost of a local authority delivering an individual in-clinic parenting programme and represents a revealed preference of what local authorities are willing to pay for improvements in | £26,800 |

Boys of PND mothers are more likely to develop behavioural problems. Occurrence assumes that half of those accessing Acacia’s befriending service have boys and that 20% of those boys would then have gone on to have poor behaviour during early school years.

9 This report provides a unit cost for a visit by a CPN.
### An economic analysis of Acacia Family Support’s befriending service

<table>
<thead>
<tr>
<th>Improved</th>
<th>Benefit Description</th>
<th>Value</th>
<th>Source</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced number of boys developing conduct disorder</td>
<td>Reduced use of mental health services during childhood</td>
<td>£5,164</td>
<td>Scott et al. (2001)</td>
<td>Scott et al. (2001) set out that the rate of conduct disorder among boys is 7% and that boys of PND mothers are more likely to develop conduct disorder. Occurrence assumes that half of those accessing Acacia’s befriending service have boys – 10% of those boys would then have gone on to develop conduct disorder. £36,147</td>
</tr>
<tr>
<td>Improved educational attainment of children at age 16</td>
<td>Increased attainment at GCSE</td>
<td>£3,200</td>
<td>CLG (2010) <em>The New Deal for Communities Programme: Assessing impact and value for money</em></td>
<td>This represents the benefit of having 4 or more GCSE’s at A* - C grade. 7</td>
</tr>
<tr>
<td>Improved family functioning</td>
<td>Improved relationships within families</td>
<td>£270</td>
<td>MB Associates (2011) <em>Investing in culture and community The Social Return on Investing in work-based learning at the Museum of East Anglian Life</em></td>
<td>Family Therapy sessions at Relate cost £45 per session, the value here assumes a course of 6 sessions 67</td>
</tr>
</tbody>
</table>
5.2.3 Estimates were made as to the extent to which outcomes could be attributed to the befriending service

Attribution is the extent to which an outcome was caused by a particular intervention: how much of an outcome was caused by a service? To what extent would that outcome have occurred without the service present? In some cases, families may have many agencies intervening within their lives that may contribute to outcomes. Below provides a description for varying rates of attribution.

Table 5.5 GHK uses a standard scale to inform estimates of attribution

<table>
<thead>
<tr>
<th>Attribution</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>The intervention was not responsible for the outcome at all.</td>
</tr>
<tr>
<td>20%</td>
<td>The intervention has a small amount of responsibility for the outcome but most lies with other interventions that were working to achieve the same outcome.</td>
</tr>
<tr>
<td>40%</td>
<td>The intervention has slightly less responsibility for the outcome than other interventions that were working to achieve the outcome.</td>
</tr>
<tr>
<td>60%</td>
<td>The intervention has slightly more responsibility for the outcome than other interventions that were working to achieve the outcome.</td>
</tr>
<tr>
<td>80%</td>
<td>The intervention has the most responsibility for the outcome but other interventions contributed a little.</td>
</tr>
<tr>
<td>100%</td>
<td>The intervention is solely responsible for achieving the outcome.</td>
</tr>
</tbody>
</table>

5.2.4 Estimates were made to account for the fact that outcomes ‘drop off’ over time

Drop off takes account of the extent to which outcomes are sustained over time. When determining drop off a number of sources can be considered, including:

- evidence from existing literature;
- qualitative data from project staff and beneficiaries; and
- any quantitative data collected relating to outcomes over time.

Table 5.6 below shows the assumptions made for each outcome in relation to attribution and drop-off.

5.2.5 Benefits were calculated over time

We used three time periods for the analysis: 3 years (short term), 6 years (medium term) and 30 years (long term). Table 5.7 shows how the total net benefits over time were calculated.
### Table 5.6: Estimates of attribution and drop off were applied to each outcome

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Attribution</th>
<th>Explanation</th>
<th>Drop off</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased understanding of PND / awareness of Acacia services</td>
<td>100%</td>
<td>Acacia is the only service providing this type of support in the area</td>
<td>80%</td>
<td>A conservative estimate (a high rate of drop off) is taken in relation to the extent to which the outcome is sustained over time in order to take account of staff turnover amongst health professionals.</td>
</tr>
<tr>
<td>Improved mental health</td>
<td>80%</td>
<td>Evidence suggests that the type of service provided by Acacia is effective in improving the mental health of mothers.</td>
<td>20%</td>
<td>It was reported in qualitative interviews that the befriending service helped women to develop practical coping strategies to better manage their mental health. It is assumed that this helps to sustain the outcome into the future.</td>
</tr>
<tr>
<td>Reduced use of restorative health services</td>
<td>80%</td>
<td>There are no similar services in the area that would achieve this outcome.</td>
<td>100%</td>
<td>A drop off rate of 100% is applied as the patient accessing a service does so at one point in time.</td>
</tr>
<tr>
<td>Reduced behaviour problems in children</td>
<td>40%</td>
<td>A lower rate of attribution is assumed here as there is potential for a range of other services to be involved in addressing behaviour problems of children aged 0–5. Given the evidence that PND has an effect on the behaviour of boys this is considered to represent a conservative estimate of attribution.</td>
<td>50%</td>
<td>It is assumed that a variety of wider social factors may lead to deterioration of behaviour over time.</td>
</tr>
<tr>
<td>Reduced number of boys developing conduct disorder</td>
<td>40%</td>
<td>A lower rate of attribution is assumed here as there is potential for a large number of other interventions to take place between the ages of 0–16. Given the evidence regarding the extent to which educational attainment of children can be affected by PND, this is considered to represent a conservative estimation of attribution.</td>
<td>100%</td>
<td>A drop off rate of 100% is applied as the patient accessing a service does so at one point in time.</td>
</tr>
<tr>
<td>Improved educational attainment of children at age 16</td>
<td>20%</td>
<td>A low rate of attribution is assumed here as there is potential for a large number of other interventions to take place between the ages of 0–16. Given the evidence regarding the extent to which educational attainment of children can be affected by PND, this is considered to represent a conservative estimation of attribution.</td>
<td>20%</td>
<td>A low rate of drop off is assumed GCSE qualifications remain valuable over time.</td>
</tr>
<tr>
<td>Improved family functioning</td>
<td>80%</td>
<td>Acacia is the only service providing this type of support in the area that specifically relates to PND</td>
<td>30%</td>
<td>It is assumed that there will be some deterioration of this outcome over time.</td>
</tr>
</tbody>
</table>
Table 5.7  Benefits were calculated over the short, medium and longer terms

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Gross value (p.a.)</th>
<th>Attribution</th>
<th>Net value (p.a.)</th>
<th>Year benefit starts</th>
<th>Year benefit ends</th>
<th>Drop off</th>
<th>Total net benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased understanding of PND / awareness of Acacia services</td>
<td>£315</td>
<td>100%</td>
<td>£315</td>
<td>2011</td>
<td>2011</td>
<td>80%</td>
<td>£391</td>
</tr>
<tr>
<td>Improved mental health</td>
<td>£240,513</td>
<td>80%</td>
<td>£192,410</td>
<td>2011</td>
<td>2011</td>
<td>20%</td>
<td>£469,481</td>
</tr>
<tr>
<td>Reduced use of primary and community health services</td>
<td>£8,571</td>
<td>80%</td>
<td>£6,857</td>
<td>2011</td>
<td>2011</td>
<td>100%</td>
<td>£6,857</td>
</tr>
<tr>
<td>Reduced use of restorative health service (mother and baby units)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low intensity</td>
<td>£5,000</td>
<td></td>
<td>£4,000</td>
<td></td>
<td></td>
<td></td>
<td>£4,000</td>
</tr>
<tr>
<td>Medium intensity</td>
<td>£4,512</td>
<td>80%</td>
<td>£3,610</td>
<td>2011</td>
<td>2011</td>
<td>100%</td>
<td>£3,610</td>
</tr>
<tr>
<td>High intensity</td>
<td>£5,304</td>
<td></td>
<td>£4,243</td>
<td></td>
<td></td>
<td></td>
<td>£4,243</td>
</tr>
<tr>
<td>Reduced behaviour problems in children</td>
<td>£26,800</td>
<td>40%</td>
<td>£10,720</td>
<td>2015</td>
<td>2015</td>
<td>50%</td>
<td>£16,080</td>
</tr>
<tr>
<td>Reduced number of boys developing conduct disorder</td>
<td>£36,147</td>
<td>40%</td>
<td>£15,973</td>
<td>2014</td>
<td>2019</td>
<td>100%</td>
<td>£274,719</td>
</tr>
<tr>
<td>Improved educational attainment of children at age 16</td>
<td>£22,400</td>
<td>20%</td>
<td>£4,480</td>
<td>2027</td>
<td>2041</td>
<td>20%</td>
<td>£67,200</td>
</tr>
<tr>
<td>Improved family functioning</td>
<td>£18,090</td>
<td>80%</td>
<td>£14,472</td>
<td>2011</td>
<td>2011</td>
<td>30%</td>
<td>£48,239</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>£1,391,800</td>
</tr>
</tbody>
</table>
5.2.6 Returns to particular stakeholders were compared

The Figure below shows that the majority of benefits included in the analysis fall to the family. This is largely due to the largest benefit, improved mental health falling to mothers. The result presented below is for three years; this finding remains constant over the different time periods used.

Figure 5.7 The majority of benefits fell to the families supported\textsuperscript{10}

5.3 Results show that the befriending service is cost-beneficial to both society and the state

Having established the net present value of costs and benefits it is possible to calculate the Social Return on Investment.

The formula for calculating the return on investment is:

\[
\text{SROI Ratio} = \frac{\text{Discounted total benefits}}{\text{Discounted total costs}}
\]

A value greater than 1 indicates a positive return on investment.

Taking a broad 'societal' perspective, for every £1 invested, the estimated social return on investment generated by Acacia’s befriending service is:

- £3 over the short term.
- £4 over the medium term.
- £6.50 over the longer term.

The befriending service therefore provides very good value for money, even when conservative assumptions were used.

If the analysis considers only costs and benefits that fall to the state the approximate return on investment of Acacia’s befriending service for every £1 invested are:

- £0.20 over the short term.
- £0.20 over the medium term.
- £1.50 over the longer term.

\textsuperscript{10} This figure presents benefits occurring over the long term (30 year time period).
The befriending service improves health and, over the long term, produces a positive return to the state. Care must be taken in the interpretation of this result. The NHS invests to produce health; savings due to reduced use of restorative services are a second-order benefit (e.g. investment in end of life drugs may improve health, it produces no financial return). Taking the narrow perspective of costs and benefits to the state excludes the major benefit of improved health since it falls to service users. These results should therefore only be used alongside this information.

5.4 This study is robust but does have limitations

This study benefitted from a substantial amount of robust existing literature. However, there were some limitations with regard to the evidence base. For example, within the scope and budget for the study it was only possibly to undertake interviews with relatively few beneficiaries and volunteers. Available resources did not allow in-depth consultation with health professionals, such as GPs and those working in the mother and baby unit. Doing so would have helped to provide a more in-depth analysis as to the extent to which Acacia had improved the ability of health professionals to diagnose PND and increased their referrals from health professionals.

It should also be noted that at present there is no common accepted method for identifying financial values for a number of the benefits identified in this analysis. In identifying a valuation for improved mental health for example, it was necessary to establish our own estimates. We have attempted to be cautious in our valuation of improved mental health and our conservative assumptions may underestimate this particular value.

Finally, any analysis of this kind relies on the use of assumptions and judgements. In this report we have attempted to have attempted to be very transparent, presenting our assumptions and rationales for making judgements at every stage. Below we undertake a sensitivity analysis, which aims to examine the extent to which altering the assumptions that underpin the analysis produce changes in the result.

5.5 The analysis was most sensitive to varying assumptions regarding improved mental health for mothers

SROI requires the use of assumptions. The degree to which these assumptions hold is therefore critical to the success of the analysis. The final step in the analysis is therefore to vary these assumptions to discover which assumptions are especially important, and the different results that are obtained by varying them.

The results of the sensitivity analysis show that the result is most sensitive to variations in assumptions regarding one particular outcome: improved mental health. However, even when varying the assumptions used in the analysis a considerable SROI was estimated. Table 5.8 shows the results of the sensitivity analysis.

Table 5.8 Results of the analysis were sensitive to variations in improved mental health

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assumption varied</th>
<th>Sensitivity</th>
<th>Effect on result per £1 invested</th>
<th>Return over three years</th>
<th>Return over six years</th>
<th>Return over 30 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved mental health</td>
<td>Reducing the rate of attribution from 80% to 60%</td>
<td>Mid</td>
<td>£2</td>
<td>£3</td>
<td>£5</td>
<td></td>
</tr>
<tr>
<td>Improved mental health</td>
<td>Increasing the rate of drop off from 20% to 60%</td>
<td>High</td>
<td>£2</td>
<td>£2</td>
<td>£3</td>
<td></td>
</tr>
<tr>
<td>Reduced use of restorative health services</td>
<td>Reducing the rate of attribution for reductions in mothers seen as outpatients at</td>
<td>Low</td>
<td>£3</td>
<td>£4</td>
<td>£6</td>
<td></td>
</tr>
</tbody>
</table>
An economic analysis of Acacia Family Support’s befriending service

From the perspective of the state was found to show a medium level of sensitivity. The results of this sensitivity analysis are shown in Table 5.9. Even when radically varying the assumptions used, Acacia’s befriending service remains cost beneficial to the state.

Table 5.9  The analysis was most sensitive to variations in the number admissions to the mother and baby unit

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Assumption varied</th>
<th>Sensitivity</th>
<th>Effect on result per £1 invested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced use of restorative health services</td>
<td>Reducing the rate of attribution for reductions in admissions to mother and baby units from 80% to 60%</td>
<td>Low</td>
<td>£0.20</td>
</tr>
<tr>
<td>Reduced use of restorative health services</td>
<td>Assuming that one inpatient admission to the mother and baby unit is avoided</td>
<td>Medium</td>
<td>£0.50</td>
</tr>
<tr>
<td>Reduced number of boys developing conduct disorder</td>
<td>Reducing the rate of attribution from 40% to 20%</td>
<td>Low</td>
<td>£0.20</td>
</tr>
</tbody>
</table>
Communicating the results

The analysis presented in this report is – in parts – detailed and technical. In presenting the process and results we have tried to be as transparent as possible – to show the workings and reasoning behind each step of the analysis. We have also tried to be clear about the assumptions underpinning the results, and associated caveats.

The reader can therefore engage with the analysis and make their own assessments as to its robustness. However, we recognise that not every potential user of the results presented here will engage with the detail of the analysis. We therefore provide the following thoughts as to the main messages emerging:

The analysis shows that the befriending service is cost beneficial

This means that the benefits generated outweigh the resources consumed. Moreover this is true:

▪ Over each of the time periods used; indeed, benefits outweigh costs within a year; and,

▪ Taking all costs and benefits into account, or considering only costs and benefits to the state.

The most accurate reflection of the return is the longer term estimate (£6.50 for every £1 invested), since it takes all costs and benefits into account; nevertheless the short and medium term estimates will be useful in showing when benefits from any investment in the befriending service are likely to occur.

Social return does not necessarily mean ‘savings’ to the state

Even when considering costs and benefits to the state, the result does not mean that there is a ‘saving’. Even where measures used are based upon the avoidance of service use, there might not be a cash saving (e.g. keeping someone out of the mother and baby unit does not equal reduced NHS expenditure, since the facilities and staff still exist and are paid for).

Nevertheless, what can be said is that the befriending service helps to contain demand (in its absence, more women would be attempting to access other NHS services), and that – in combination with other policies – it could potentially help to generate cash savings.

The analysis shows the value of a volunteer-led service

We have put monetary values on the support provided by Acacia’s volunteers, and the contribution made by ‘free’ and ‘cheap’ venues. This provides Acacia with a useful set of figures to show the value of the volunteer-led nature of the service. In particular, showing that ‘for every £1 of cash investment, Acacia brings £1.30 of resources in-kind’ is likely to be attractive to funders. This is important when thinking about the arguments for the funding of a service delivered by the voluntary sector relative to other potential providers.

Moreover, Acacia works to limit barriers to accessing the service in a manner which is often beyond the scope of mainstream services. The provision of access to free child care and assistance with the costs of transportation along with Acacia’s organisational ethos which provides a strong emphasis on inclusion and hospitality are all elements of the service that are not available to those providing mainstream services.

The returns would change if the service is scaled up

In part, this analysis was performed in order to inform the potential scaling up of Acacia’s services. It should then be noted that there would be reasons to expect that the results of the analysis presented here would fluctuate as services expanded. This is because:

▪ The service considered here is mature and established. It takes time to develop local relationships which are important in leveraging in-kind support (e.g. in the form of volunteers and access to venues) and building a base of referrals from health professionals. These factors are likely to mean that initial returns from an expanded
service would not be as great as those set out in this analysis for the period where the service was establishing itself.

- As the service expands it will be necessary for the infrastructure of the service to grow. There will be tipping points in the cost base. For example, it may be possible for one volunteer manager to hold responsibility for supervision of 30 volunteers, but in order to provide adequate supervision to 40 volunteers it may be necessary to employ a second volunteer manager. This would lead to an increase in the level of cost whilst a similar increase in benefit is likely to take longer to occur.

The overall finding is that increasing investment and expanding the service would continue to generate a positive return; but that there would be some subtlety in the changing timing, nature and scale of return as the service expands.

*The analysis is evidence-based and conservative*

There were a range of possible benefits that were excluded because there was insufficient evidence available. Where there was a choice of alternative assumptions, we erred on the side of conservatism and ‘under claimed’ for benefits. This enhances confidence in the final result. Moreover, because of the high grade of evidence available to this study, we can afford a high degree of confidence in its robustness.
ANNEXES
Annex 1 Bibliography

- CLG, 2010. The New Deal for Communities Programme: Assessing impact and value for money
- Edoka, I et al (2011) Healthcare costs of paternal depression in the postnatal period
- Health and Social Care Information Centre, 2009. Adult psychiatric morbidity in England, Results of a household survey


- Sobocki, P (2006) *Health Economics of Depression*
Annex 2  Glossary

This annex draws on the SROI Guide 2009 which can be found here:  
[http://www.thesroinetwork.org/component/option,com_docman/task,cat_view/gid,29/Itemid,38/](http://www.thesroinetwork.org/component/option,com_docman/task,cat_view/gid,29/Itemid,38/)

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>Activities</td>
<td>The actions that an intervention takes</td>
</tr>
<tr>
<td>Additionality</td>
<td>The extent to which something happens as a result of an intervention</td>
</tr>
<tr>
<td>Attribution</td>
<td>How much of the outcome was caused by other organisations or people</td>
</tr>
<tr>
<td>Avoided Cost</td>
<td>What might have been paid had an intervention not taken place (e.g. the cost of treatment for an old person admitted to hospital if a fall had not been prevented)</td>
</tr>
<tr>
<td>Base Case</td>
<td>The findings of an analysis before variables and assumptions are tested for their sensitivity (see sensitivity analysis below)</td>
</tr>
<tr>
<td>Deadweight</td>
<td>The amount of the outcome that would have happened even if the activity had not taken place</td>
</tr>
<tr>
<td>Discounting</td>
<td>A process in which future financial costs and benefits are recalculated to present day values through the use of a discount rate</td>
</tr>
<tr>
<td>Discount Rate</td>
<td>An interest rate used to discount future costs and benefits to find their present value (see net present value). In the UK, the HM Treasury Green Book guidance suggests a rate of 3.5%</td>
</tr>
<tr>
<td>Drop-off</td>
<td>The deterioration of an outcome over time</td>
</tr>
<tr>
<td>Duration</td>
<td>How long an outcome lasts following an intervention</td>
</tr>
<tr>
<td>Impact</td>
<td>Impacts represent the long term difference made by the project</td>
</tr>
<tr>
<td>Indicator</td>
<td>A defined measure of an outcome</td>
</tr>
<tr>
<td>Inputs</td>
<td>Contributions made by a stakeholder to ensure an activity takes place</td>
</tr>
<tr>
<td>Logic Model</td>
<td>An illustration of how the impacts of a project or programme are achieved. Logic Models show the links between inputs, activities, outcomes and impacts within the context in which the project or programme operates.</td>
</tr>
<tr>
<td>Monetise</td>
<td>To assign a financial value to something</td>
</tr>
<tr>
<td>Net Present Value (NPV)</td>
<td>The value of an investment in today’s prices. Net Present Value is found by taking the total value of benefits and costs now and in the future. Future benefits and costs are then adjusted to today’s value by applying a discount rate. The costs are then subtracted from the benefits to give the value of an investment in today’s prices.</td>
</tr>
<tr>
<td>Outcome</td>
<td>The changes that result from an activity</td>
</tr>
<tr>
<td>Outputs</td>
<td>A description of activities in quantitative terms</td>
</tr>
<tr>
<td>Proxy</td>
<td>An approximation of value where an exact measure cannot be obtained</td>
</tr>
<tr>
<td>Scope</td>
<td>The boundaries of an analysis</td>
</tr>
<tr>
<td>Sensitivity Analysis</td>
<td>A process in which the effect of changes to variables and assumptions used in a base case are assessed</td>
</tr>
<tr>
<td>Social Return Ratio</td>
<td>The total present value of outcomes divided by the total investment</td>
</tr>
<tr>
<td>Stakeholders</td>
<td>People, organisations or entities that experience a change as a result of a given activity</td>
</tr>
<tr>
<td>Willingness to Pay</td>
<td>A method of placing a monetary value on a given outcome by asking people how much they would be willing to pay in order to achieve that outcome</td>
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