GUIDANCE FOR SURE START LOCAL EVALUATORS AND PROGRAMME MANAGERS ON THE ESTIMATION OF COST-EFFECTIVENESS AT A LOCAL LEVEL

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NATIONAL EVALUATION OF SURE START

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Introduction

What is this guidance for?

All Sure Start programmes are required by the Sure Start Unit to conduct local evaluations which include an analysis of the cost-effectiveness of the programme as part of that evaluation. This guidance is intended to help Sure Start programme managers and local evaluators who may be unfamiliar with this kind of evaluation to tackle this requirement. The guidance assumes that the evaluator has an understanding of the services being provided locally, but is unfamiliar with the estimation of cost-effectiveness and with economic evaluation more broadly. The aim is to give evaluators a basic toolkit that will enable them to look at cost-effectiveness at a local level with the aim of providing feedback to programmes about how effectively they are using the resources available to them.

The methods described in this guidance are not the only way that local programmes can deal with this task, but if you follow this guidance, you can be assured that you will have fulfilled the **minimum** requirement for this element of your evaluation. You will find that if you can do more than this minimum it will be useful.

The National Evaluation of Sure Start does **not** require this information. The evaluation of cost-effectiveness at a national level will draw on information about costs from the Sure Start Unit. The purpose of evaluating cost-effectiveness at a local level is to assist and inform the allocation of resources at a local level. However, we ask you to send us copies of your local evaluation reports so the findings from these feed into the national evaluation and also inform the direction of the national evaluation.

What is cost-effectiveness?

The analysis of the cost-effectiveness of any programme is a tool, not a threat. All resources – money, people, skills, buildings – have alternative uses. Unless resources are being used cost-effectively in one use, then better outcomes for children, families and the wider community could be achieved by using them differently. The responsibility to use resources efficiently and effectively stems from this principle. The decision to devote resources to the activities funded under the Sure Start means that a higher priority has been attached to these activities both locally and nationally, than to other activities which could make use of the same resources. It is the responsibility of local evaluators to advise programmes whether or not the services and outcomes which are being delivered justify the priority that they have been given. It is the responsibility of programme managers to ensure that the resources used locally by Sure Start are doing what they set out to do.

Who should measure cost-effectiveness locally?

In most areas, the cost-effectiveness evaluation will be done by the people who have already been commissioned to do the local evaluation. However, in other areas, the general focus of the local evaluation, and hence the skills of the people chosen to do it, may make this difficult. In these cases some programmes may choose to

commission the cost-effectiveness analysis as a free standing piece of work. (It should be possible for a consultant or academic with some relevant knowledge or experience either of cost-benefit analysis or unit costing to complete the basic minimum task in around ten days.) Other programmes may treat it as an internal task for someone with finance expertise who is familiar with local accounting procedures. Programmes who want to commission someone specially to look at cost-effectiveness will find that someone with a background in microeconomics (particularly in health or public services more generally), audit, best value or business studies is likely to have the necessary skills.

What services should be included?
The guidance draws on examples from a wide range of services in order to be as helpful as possible to those using it. However, although it is possible to look at the cost-effectiveness of any service, some programmes have twenty, thirty or even forty different services, many of which will involve the expenditure of relatively small amounts of money. As a minimum you should look at the cost-effectiveness of the following services:

- Childcare
  - Full day care
  - Crèche sessions
- Playgroups
- Visits:
  - ante-natal
  - two months
  - 18-24 months
- Key locally inspired services to meet local priorities, for example transport to specialist health services

If you look at the cost-effectiveness of these services, you will satisfy the requirements of the Sure Start Unit. For your own purposes, you may want to look at the cost-effectiveness of some other services, and the guidance should help you to do that.

Sure Start costs will exceed potential savings
Analysing cost-effectiveness does not mean that all expenditure needs to produce positive savings elsewhere. Sure Start is intended to improve the lives of young children and their families over a period of years, if not decades, and programmes are not expected to produce instant savings. But they are not expected to use money wastefully either.

Mainstream and voluntary sector services
Although the guide will discuss in places the costs of mainstream services provided by voluntary and statutory agencies within the Sure Start area, the Sure Start programme is not accountable for these. Information about the costs of these services is important contextual information for Sure Start programmes and their evaluators, but your role as a local evaluator is to help local programmes deliver the services for which they are accountable efficiently and effectively. Moreover, if the unit costs incurred by Sure Start are significantly higher or lower than the costs incurred by other providers in the area, or by other Sure Start programmes then you should try and find out why this is the case. This information is likely to prove useful.

PSA and other targets

The emphasis in this guide is on the cost-effectiveness of the achievement of the Public Service Agreement and other locally determined targets for Sure Start. These are the measures against which the success of programmes is being judged. The targets themselves are not necessarily what Sure Start is actually trying to achieve, but they have been chosen because they are believed to be associated with the improved life chances for children and families that Sure Start is working towards. In other words, the targets are indicators that the programme is making progress on some key dimensions in the lives of children and families in the Sure Start area. They are indicators of that progress, and each target effectively acts as a proxy for a wide range of outcomes. The national evaluation will look directly at a range of outcome indicators across the whole programme, both during and after the agreed funding period. However, during the years for which Sure Start funding has been agreed, it is the achievement at a local level of the agreed performance targets that matters.

SURE START PSA TARGETS FROM APRIL 2001:

- A reduction of 20 per cent in the number of children aged 0-3 who are re-registered on the child protection register within a twelve month period (an indicator of social and emotional support)
- A reduction of 10 percentage points in the proportion of women who continue to smoke during pregnancy (a key health indicator)
- A reduction of 5 percentage points in the number of children with speech and language problems requiring specialist intervention by the age of four (a key child development indicator)
- A reduction in the number of children aged 0-3 who live in workless households (a target in its own right)

In terms of measuring cost-effectiveness at a local level, the last three targets are easier to deal with than the first. This is because the number of children on the child protection register is small in any case, so that one or two families can disproportionately affect local figures. In the other three the numbers involved are likely to be larger, and therefore easier to deal with, although there is still a risk of random fluctuation from year to year. The targets which have been set locally are generally easier to deal with for evaluators.

Note that two of the targets are framed in terms of a percentage point reduction. This means that they may be easier to achieve in areas where the baseline is high, than in areas where the easiest cases have already been dealt with successfully. Thus, an area where 50 per cent of pregnant women smoke is likely to find it easier to reduce that to 40 per cent than an area which has already achieved 40 per cent is to reach 30 per cent. The more marginal the case, the more difficult (and therefore expensive) it is likely to be to tackle. (On the other hand, it is possible that in some areas the opposite may be true. It may be more difficult to reduce smoking among pregnant women when the peer group norm is to continue to smoke than it is when peer group pressure serves to reinforce the message from health professionals.) You will need to bear this

in mind when looking at cost-effectiveness locally, and when comparing your outcomes with those in other areas.

The three Es

In looking at the cost-effectiveness of the use of resources, there are three different ways of looking at the issue: economy, efficiency and effectiveness. These are known collectively as the three Es.

THE THREE Es	
EFFICIENCY:	The use of the minimum level of resources necessary to achieve the desired outcome
EFFECTIVENESS:	The achievement of the best possible outcome for a given level of resources
ECONOMY:	The use of as few resources as possible

Both **efficiency** and **effectiveness** are important. Cost-effectiveness evaluation should consider both. Efficiency considers the extent to which services are delivered using the minimum necessary level of resources. But effectiveness considers whether or not a service is actually achieving what it sets out to achieve. Thus, for example, a programme providing ten-minute long home visits might appear to be very efficient, delivering visits at a low unit cost, but the visits might be too short to achieve anything. In other words, they would not be effective. Efficient but ineffective use of resources does not represent value for money. Conversely, hour-long visits by experienced health visitors might be very effective, but other, more efficient approaches might be nearly as effective in terms of achieving the confidence of and delivering advice to parents, as well as monitoring the development of their children.

Why does cost-effectiveness matter?

Many people find the term cost-effectiveness frightening, because they believe it is about saving money, often by cutting corners, but in many ways it is common sense. It is about ensuring that the money we spend achieves its purpose. Sometimes in order to achieve our purpose we need to spend more money. In other cases, more money does not produce a better outcome, and we could do just as well by spending less. But what is cost-effective depends on what we are trying to achieve.

Cost-effectiveness analysis helps to inform the trade-offs which have to be made when it comes to deciding how to allocate taxpayers' money. A million pounds can buy drug treatments, police officers, school places, road safety improvements, or new houses. If the money which is being spent in one of these areas is not doing what it is

supposed to be doing, then there is a good argument for saying that it should be spent in one of the other areas, where it might do more good.

In our daily lives, we make decisions all the time based on cost-effectiveness criteria. If we want clean clothes, we have four options: we can sent them to a laundry service, we can go to the launderette, we can buy a washing machine and do the washing at home or we can wash everything by hand. Each of these has a cost in both monetary terms and our own time, and each has subsidiary benefits or costs. The laundry is expensive in cash terms, but involves a minimal amount of our own time. The launderette is cheap, but time consuming. Washing at home comes somewhere in between. We make our choices on the basis of the overall cost, both cash and time. Different people value their own time differently. Generally those who work long hours put a premium on their leisure time, while those who do not have jobs generally place a lower implicit value on their time, but have a strong preference for minimising cash outlays. Few people in Britain choose to do all their washing by hand, although in other parts of the world it may be the only option. It may be cost-effective for a high earner to use a laundry service, but for most people the choice is between the washing machine and the launderette.

The trade-off then becomes a bit more complex. A washing machine requires up-front payment, or a loan, whereas the launderette is fully pay-as-you-go. But the launderette machines tend to be more efficient than domestic models, so the clothes could be cleaner in the short run. But in the long run they will take more of a battering so could wear out sooner. Other considerations then come into the picture. Do you have a job which requires frequent washing of your work clothes? Are you a fashion victim who only wears the latest styles, or do you expect your shirts to last for years? How many sets of underwear do you own? Can you run your washing machine on cheap off-peak electricity?

Cost-effectiveness and Sure Start

Sure Start is trying to improve the long-term life chances of the children in the area. It is doing this in ways which vary from area to area according to local circumstances and priorities. The programme is new and the approaches which have been adopted are generally untried in Britain. Moreover, unlike say a new treatment for a particular illness, we will not know properly how successful the interventions have been until the children are much older. This means that at this stage, the analysis of cost-effectiveness at a local level has to concentrate on what is actually being delivered by the local Sure Start programme and at what cost.

Each local Sure Start programme is spending money on delivering services to young children and their families. The local evaluation does not need to ask whether those services will lead to better outcomes. This is an issue for the national evaluation, which will be collecting evidence from different parts of the country. At a local level, the key questions are:

- Which services are being provided by Sure Start?
- Does Sure Start bear all or part of the cost of the services being provided under the programme?
- If only part who bears the rest of the cost?
- Are similar services being provided by other agencies?

- What are the unit costs of the services provided under Sure Start, and the total cost of local provision for children and families in Sure Start areas?
- Where can you obtain information about the costs carried by other agencies or organisations?
- What proportion of these costs is attributed to each of the PSA targets, and other locally agreed targets.
- Could the services have been delivered at a lower cost, or to a better standard at the same cost?
- Are services in other areas or to other groups of children being cut back to accommodate the pressures of delivering Sure Start services?

The emphasis on the use of resources in cost-effectiveness evaluation, does not mean that other, non-resource issues are unimportant in producing overall outcomes. They may be absolutely crucial. Without the motivation and social support available within the community, all the resources may be wasted. In other parts of the evaluation, particularly the analysis of the community context, this aspect will be considered. But the purpose of the cost-effectiveness evaluation is to examine the use of resources.

Why should you be concerned about cost-effectiveness at a local level?

It is more or less inevitable that the costs of providing particular services will vary from place to place. In part, this will reflect the previous provision in the area. An area which already has a new purpose built nursery will almost certainly be able to provide additional places at a lower cost than another area which needs a new building. Home visitors working in compact urban areas will be able to visit more families per day than those working in more scattered communities. In some areas shortages of key professions are such that programmes will need to pay a premium, for example for additional hours of speech and language therapy. An area with a large number of families of asylum seekers is likely to incur higher costs, not least in respect of interpreters, than an area with a predominantly settled English speaking population. There is not a single "correct" level of costs which should apply across the board. But the question evaluators should be asking is whether the level of costs which exists locally reflects the difficulty of the local circumstances, or whether resources could be used more efficiently.

Local evaluators are not expected to provide all the answers. But they are expected to inform local programmes about the areas in which their use of resources could be challenged, or should be examined in more depth. It is worth bearing in mind the approach adopted by the Audit Commission or the Chartered Institute of Public Finance and Accountancy when it is reviewing the costs of providing a particular service. Thus, it is standard practice to calculate the cost of refuse collection per head of population in a particular local authority area. It is generally accepted that rural areas will have higher collection costs than urban areas, because each refuse lorry and its crew will spend more time on the road between houses and less time actually collecting. The exception to this may be city centre areas where collection has to take place at night or very early in the morning in order not to interfere with traffic or in order to collect in pedestrianised zones. This probably requires a premium to be paid to staff. A second source of cost variability is how far the refuse has to be transported for disposal and the cost of disposal itself, either by landfill or by incineration. Finally, local labour costs may be above or below national average levels. In general, each area will know which of the above factors applies to them, and is able to

compare its own performance with others in similar circumstances. This process, which is widely used in business as well, is known as benchmarking, and will be discussed in more detail below.

Finally, there is a cost involved in estimating the costs of providing services. This means that a reasonable approximation may be more useful than a precise estimate. You need to know whether a home visit costs £15 or £60. You do not need to spend hours agonizing over whether it costs £29.60 or £31.30. The chances are that the level of accuracy in your underlying information is not good enough for you to judge. You can be satisfied that you have established that the cost is around £30. You recognise that in reality it might equally well be a pound or so higher or lower, but you can be reasonably confident that it is not more than £40. This is really what you need to know. If the cost of home visiting across all Sure Start programmes ranges from, say £15 a visit to £60, you can be confident that your costs look fairly typical. If, however, your estimate is £50, you might want to check your calculations, to make sure you have not double counted anything. Once you have done this, you might then want to consider why your costs seem to be well towards the upper end of the range. Is your programme using experienced health visitors because local managers have taken the view that although expensive this will lead to more successful outcomes, while others are using specially trained members of the local community? Does your programme have higher management and other overhead costs than average? Do your home visitors spend a lower proportion of their time on actual visits and a higher proportion on associated paperwork? Is yours a rather scattered area, so that home visitors have to spend more time travelling between visits?

How to look at cost-effectiveness

Ultimately the purpose of Sure Start is to improve the adult life chances of children who grow up in deprived communities. These are the planned **outcomes** of the programme. These outcomes cannot be measured until the children have grown up (perhaps in twenty years' time or more). In the short-term, therefore, what we are seeking to measure is **outputs**: what the programme is actually delivering in terms of services. The purpose of delivering these outputs is the belief that they are likely to improve the long-term outcomes for children. Thus, the particular services being provided by all Sure Start programmes, and for which they were originally invited to put forward bids, are based on evidence from other countries about the kind of early childhood services which are associated with improved outcomes for the recipients in adulthood.

WHAT DOES SURE START DELIVER?

OUTPUTS:	The services being delivered by the programme
TARGETS:	Indicators that services are achieving their objectives
OUTCOMES*:*	Key features in the life and circumstances of children, families and communities. These include cognitive and socio-emotional development, health, educational qualifications, employment and earnings

How they deliver those improved outcomes is not necessarily well understood. Some of the potential routes are improved parent-child interactions, improved child development (physical, cognitive or socio-emotional), improved parental health and well being, changed parental behaviour in terms of substance use or involvement in crime or anti-social activities. The good news is that you do not have to measure outcomes. The measurement of cost-effectiveness at a local level is chiefly a matter of looking at the costs of providing Sure Start service **outputs**. Thus, a typical set of questions would be:

- What is the cost of a home visit?
- How many home visits does each family have on average between birth and the age of one, and birth and the age of four?
- What is the cost of providing home visiting for each child up to the age of one, and for each child up to the age of four?

In some circumstances it may be possible to take the analysis a stage further and consider the relationship between the measured outputs (in this case the number of home visits) and the outcomes in terms of indicators of well being of children and families. However, the links are likely to be indirect, and the outcome measures you will have to work with (for example smoking during pregnancy) are essentially community level rather than individual level indicators.

We know that programmes have chosen different routes for delivering their home visiting. Some are using trained health visitors; others are using nursery nurses, specially trained members of the community or experienced mothers. The costs of these different approaches are likely to differ, but it may be some years before it becomes apparent which approaches are cost-effective in terms of securing desired outcomes. For the present, we can only see what is the cost of providing a particular level of outputs. The approach of individual programmes will be based on the view taken at a local level as to how best to meet the particular needs of the local population. As these will vary depending on the existing service base, levels of trust in existing service providers, the level of local indicators such as emergency admissions to hospital, whether or not families with special needs such as asylum seekers or those with disabled children are over represented among the local population, what will be right for one area may well be wrong for another. If more expensive provision proves to be more effective in terms of long-term life chances, then it may be more cost-effective than cheaper provision. But at this stage, we have no way of knowing the answer to this question. The purpose of mentioning it here is to remind evaluators that there are not necessarily any easy solutions.

MEASURING COST EFFECTIVENESS AT A LOCAL LEVEL

There are seven steps involved in analysing the cost-effectiveness of a local programme:

- **Step 1:** What services are being provided for children and families in the Sure Start area, and what resources are being used in providing those services?
- **Step 2:** Allocate all costs (including an appropriate share of overhead costs) to individual services
- **Step 3:** Calculate the total costs for each unit of service provided (per home visit, or per half day session at a drop-in centre, for example)
- **Step 4:** Consider what the service which is being delivered is trying to achieve. Although Sure Start has long-term objectives, it is also seeking to deliver more immediate improvements in the well being of children and families. Relate your unit costs to outcome targets both national and local.
- **Step 5:** Look at the costs of achieving particular service targets in your area by comparison with other local providers, national benchmarks or information from other Sure Start areas
- **Step 6:** Consider whether there are any savings that can be attributed to any of the achieved targets, and if so, provide an estimate for the value of those savings
- **Step 7:** Write a report for your local programme on its cost-effectiveness performance

Step 1a: What services are being provided and what are the costs?

At first glance, this seems to be a question that is both irrelevant and unnecessary. This is because in everyday life most people regard something as a cost if they have to spend money on it. However, as we discussed above, although money is an important measurement of the resources consumed in delivering a particular service it is not the only one. Moreover, the Sure Start programme budget is not the only money involved. We need to measure the costs of all the resources used in delivering Sure Start services which could potentially be used in other ways. Economists call this an opportunity cost. It is a measure of what cannot happen in order for Sure Start to happen. It recognizes that resources – money, people, buildings, skills, electricity, transport – are all limited. If they are used in one way, they cannot be used again in another. Opportunity costs represent lost opportunities. Providing services for young children may mean that services for young people leaving care are not improved. Converting a building into a centre for young children and their parents may mean that elderly people lose their chance for a day centre.

Another way of looking at the issue of opportunity costs is to think in terms of replicating the programme. The level of resources used in delivering a particular set of services represents the level of resources that would need to be found in order to replicate those services for another group of children and families. The fact that an individual Sure Start programme has been given a share of a building funded by

lottery money, for example, does not mean that that building is "free". In order to provide the same level of services in another area the funds would have to be found to provide a similar building. Thus the resources which are made available by other parties or organisations, including donations from the private sector, must be fully costed.

For example, in order for a service provider (a health visitor, say) to spend half an hour with a family, she may spend a similar amount of time in the office and travelling. She also spends time on training courses, on holiday and may have some sick leave during the course of a typical year. Her office will have a cost in terms of rent, heating, lighting, telephone, computers, health and safety, maintenance etc. Even where the health visitor service is not charged for these accommodation costs, they are being borne elsewhere within the health service and should be included. She is also supported by whoever manages the health visitor services. Some services also have receptionists and clerical staff, and their costs have to be shared. Some central costs (eg payroll and personnel services) will also relate to the employment of the health visitor, and will need to be spread across all her working activities. Each visit will have an associated travel cost.

Thus, following through the principle that we should count as a cost the opportunities foregone by running services for young children and their families the costs you take into account must include the following list. How to obtain or calculate this information is set out in more detail below.

1. Services provided directly as part of the Sure Start programme:

- The full cost of providing services which are part of the Sure Start programme itself. These costs should include:
  a) Salary, National Insurance and superannuation costs of staff delivering Sure Start services and their managers and support staff. Where staff are only partly funded to provide Sure Start services (for example speech and language therapists) you should estimate their total costs and the proportion of them that are attributable to Sure Start.
  b) Costs of premises used to deliver Sure Start services, whether charged to the programme or not. These should include the depreciation cost of the capital involved if it is a new building, rent, rates, heating, lighting, cleaning, insurance, furniture etc.
  c) Costs of volunteer resources used to deliver the Sure Start programme (including costs of the voluntary activities of parents). This should include the costs of training, supervision and support, but also an element to cover the costs of the "free" resources in terms of volunteers' time. (They could have been doing something else with the time, even if they have chosen to be involved with Sure Start)
  d) Transport and travel costs (including an appropriate share of any shared transport (eg a minibus).
  e) The costs of managing those providing Sure Start services, both the costs of managing Sure Start itself (including the costs of the local evaluation), and the costs of recruiting, managing, training and supervising the staff, which may be borne by a partner organisation. For example, if home visitors are supervised by health visitors, the cost of that supervision may be borne by the health trust. However, you do not need to estimate the costs to partner

organisations of their representation on the management committee or any other supervisory body for the local programme. Although there will be costs to them, the cost of collecting this information is likely to be greater than any value it provides in terms of informing local policy.

f) The costs of providing support services to the Sure Start programme (eg personnel, finance and information technology services). Sometimes there will be a transfer of funds to cover this, but sometimes a partner organisation will absorb the cost. It will, however, still represent a use of resources.

- The costs of any goods provided for the use of children and their families (for example toys, books or baby baskets)
- The value of any cash or vouchers given to families
- The value of any goods or services donated by local businesses (for example, a local company might provide drinks or snacks for a family fund day, or packs of nappies for baby baskets).

2. Mainstream services which are specifically provided for young children and their families:

Sure Start programmes should be encouraging better co-ordination of the mainstream services which overlap with and complementary with the services provided by Sure Start itself. While you do not need to evaluate what those services are delivering, unless the services themselves want you to do so, it is important to understand the level and scope of mainstream services, because this influences the level and scope of services that Sure Start programmes have to provide.

The most important mainstream services which are provided for children under the age of four and their families are:

- Social services, including family centres, parent and toddler clubs, day nurseries, support for childminders
- Health services, particularly health visitor services, baby clinics and speech and language therapy
- Early years, childcare and education provision for under fours (and their parents where relevant)
- Some other local authority services especially targeted at children under four, for example special library facilities or parent and toddler swimming sessions

Where some or any of these services are being provided in your area, you should consider calculating the unit costs in the same way as for Sure Start services themselves, since this will help you in comparing the efficiency with which the Sure Start programme is using its resources. Remember, that the resources devoted to mainstream services for children and families in Sure Start areas are likely to be considerably greater than the costs of providing the new or additional services which are part of the Sure Start programme. But remember as well, that the chances are that within your local authority or health trust, somebody has already done a lot of the necessary work underpinning your calculations. Thus, for example, if somebody has estimated the average cost of providing a nursery place in your local authority area, then use this figure rather than attempt to calculate the costs for a specific nursery yourself. Although the nursery in the Sure Start area might have costs which are higher or lower than the local average, they are unlikely to be sufficiently different to justify the extra resources involved in doing the calculation from scratch unless you

know that there are likely to be marked differences because of particular local circumstances (for example the local nursery has higher staffing rations because one in five of the children it caters for come from asylum seekers' families and therefore have special language, nutrition and health needs). On the other hand, if that is the case, the chances are that someone within the local authority has already done the calculation of the additional costs involved, because they will have had to do so when the decision was taken to deviate from local staffing norms. The watchword is be pragmatic and practical. Costing is not rocket science, but it is an important part of understanding what Sure Start does and how it does it.

3. Services provided by the voluntary sector

Some voluntary sector services are funded by local authorities, particularly social services departments. When considering voluntary sector services, therefore, it will be important not to double count. For instance, a voluntary organisation might run a playgroup in or close to a Sure Start area, which provides places for children from the area and for other children. The places are funded by a mixture of nursery education grant, grants from social services, parental contributions and voluntary fund raising. To the extent that children from the Sure Start area are drawing on non-parental sources of support, these should be identified, but nursery education grant and social services grants should not be counted both as part of mainstream provision and as part of voluntary sector provision. They should only be counted once. But the contribution from voluntary fund raising can only be counted under the voluntary sector heading.

Voluntary organisations may be putting resources into the area in other ways. Voluntary organisations are an important source of information, advice and support for parents and children in many areas. Sometimes this support may be a service similar to those provided under the Sure Start programme itself (for example a family centre or parenting courses). In other cases, voluntary organisations may be providing complementary services, such as parent support helplines.

4. Services for all members of the community

It is not necessary to provide cost information for services which are consumed by young children along with other members of the community. Thus, services such as public transport, refuse collection, street lighting, or road safety need not be included even though young children benefit from them. Nor is it necessary to provide information about the costs of services provided and paid for wholly within the private sector (for example, private nurseries funded entirely by fees paid by parents).

5. Opportunity costs and additionality

When you have calculated your costs (including the costs of "free resources" funded from other sources), there is one final set of costs that you need to consider. These are the services which are no longer being provided in the Sure Start area, or nearby areas as a result of the existence of the Sure Start programme. Opportunity costs can come about in a variety of ways. For example, a health trust may be unable to fill its health visitor or speech and language therapist vacancies because people have chosen to work with Sure Start instead. In this case, the value of the opportunity cost would be the salary of the unfilled vacancy. This is the value of the mainstream services displaced because of Sure Start. But the displaced services need not be directly targeted at children under four. For example a school holiday play scheme for

primary school children may have been discontinued because the existence of Sure Start has led the local authority to concentrate its resources on younger children in order to play its part in meeting the Sure Start targets.

The estimation of these opportunity costs is sensitive, and realistically can only be done at a local level, where there is information about the decision making process. It is often likely to be the case that the existence of Sure Start was only one of a number of factors which led to the closure of a particular service, or the non-expansion of others. In this case, you will need to attribute a share to Sure Start.

If you do identify opportunity costs, it is unlikely that you will be able to attribute them to any particular aspect of the Sure Start programme. Generally, you should treat them in the same way as you treat programme central overheads.

Step 1b: Where to find the information you will need

The Sure Start programme financial records should hold much of the information you will need. This is because it is used in the local management of the programme, and also because much of the information that you will need has to be provided by your local programme to the Sure Start Unit in London. The first thing you should do, therefore, is to find out exactly what information is already being held by your programme (or by the partner organisation responsible for your finances or service delivery).

Although programmes are required by the Sure Start Unit to hold standardised financial information, different programmes hold information about outputs differently. One of the key factors is whether programmes themselves hold the names and addresses of eligible children. Although health trusts hold this information, and programmes where the trust is the lead partner generally have access to it, the attitudes of trusts towards sharing the information where another partner is in the lead varies. Other programmes have devised other ways of compiling lists of the eligible children in their areas.

All programmes have to report monthly to the Sure Start Unit the extent to which they have made contact with and are providing services to all eligible children. If your programme does not have access to lists of children from health visitors, you will need to find out how they are keeping track of eligible children and measuring which services they get. Programme's returns to the Sure Start Unit only have to report the proportion of eligible children who have received any services during a particular month, but in order to compile this information programmes themselves will hold more detailed information about which services are being used. This is an area where you might want to share experiences with other local evaluators. You will need this information, because you will need to know what outputs have been delivered, and how this relates to the target levels for your programme. Some of these output targets have been laid down centrally. Others will have been determined locally. Part of your responsibility will be to check whether the targets are being met and to feed back to programme managers any areas where action is needed.

Step 2: Attributing costs to individual services

Service delivery arrangements vary from area to area. This means that the nature of the financial and performance information held by programmes is likely to vary as

well. For instance, a Sure Start programme can have a block funding arrangement with the health trust for the health visitor service to deliver home visits. You will need to find out how the trust accounts for these funds to the Sure Start programme and how they record the number visits made. (Although this arrangement looks potentially complicated, it actually makes life easier for you, because it ensures that a particular sum of money is assigned to a particular output. This will not always be the case.) In another area, home visitors may be employed by the Sure Start programme itself, but work under the supervision of the health visitors, and are sometimes accompanied by interpreters. In this case the cost of home visiting has to be calculated by taking the cost of the visitors, establishing with the health visitors the costs to them of supervision, and establishing with the programme manager the way in which interpreters' costs are assigned to different activities.

For mainstream services which are outside Sure Start funding arrangements, your programme may already have made an estimate of the resources which are being provided. In many cases, you do not need to worry about them. Where they do matter is when a service may be provided partly with Sure Start funding, and partly with funding from other sources. So, for example, nursery places which combine education and day care may be provided from mainstream early years provision, from Early Years Partnerships or from Early Excellence Centre funding. You can only consider the costs of places funded by Sure Start within this context, since the resources required to provide an additional twenty places, say in an environment where there are already eighty places, are very different from the resources required to provide fifty places when there are only twenty already. You will therefore need to look at the cost of the marginal Sure Start places, and the total average cost of all places, however funded. The same sorts of issues apply to provision of play sessions.

Sure Start programmes should hold information about the costs and volumes of services provided by other agencies, but they will not always do so. You may find that you and the programme may need to make a joint approach to the relevant agency to get the information that you need. Cost information and volume information are probably held separately. Those responsible for front line service delivery are more likely to have volume information, but may not hold information about costs. Conversely, finance departments generally hold the relevant cost information, but may not have information about service volumes.

Step 3: How to calculate the unit costs of a particular service

This section will show you how to calculate unit costs based on two (imaginary) worked examples: home visiting and a parent and toddler drop-in centre. The method which is used is the same in both cases. In Step 2 you have established the direct costs of providing a particular service. You now need to add the indirect and overhead costs which should be attributed to that service. There are four kinds of costs here:

- Cost of support services related to the service being provided (for example the costs of the office base from which home visitors work is co-ordinated, the costs of supervising the home visitors, if not already included, and the cost of office services such as a receptionist, photocopying, telephones, cleaning etc)

Example 1: Home Visiting

Salary cost of home visitor	£10,000
National Insurance and superannuation	£2,500
1/8 share of cost of supervising health visitor	£3,230[1]
1/25 cost of office support staff	£1,000[2]
1/25 share of office rent (notional or actual)	£560
1/25 share of office cleaning, lighting, heating etc	£144
overhead costs (central services, telephone, stationery etc and Sure Start management)	£1,250[3]
Total costs per home visitor	**£18,684**
Number of weeks worked per year (excluding holidays, sick leave and training)	42
Average number of visits achieved per working week	15
Number of visits achieved per working year	630
Staff and related costs per visit	£29.66
Travel costs per visit	£2.00
Average cost per achieved visit	**£31.66**

Notes:
[1]This is based on one health visitor supervising 8 home visitors
[2] This is based on a receptionist and clerical assistant with a total cost of £25,000 servicing an office with two teams of 8 home visitors and 9 health visitors
[3] This is based on 10 per cent of salary and related costs
[4] Although home visitors will undertake other tasks (eg attend team meetings, work with groups of parents etc, these are ancillary to their main purpose). If they did not undertake home visits they would not be employed and would not therefore be doing these other tasks.

- The costs of providing central services to the service concerned (for example the cost of central payroll and personnel services)
- A share of the overhead costs of the management of the Sure Start programme itself.
- Any identified opportunity costs

If you are interested in further examples the Department of Health has sponsored Dr Jennifer Beecham from the Personal Social Services Research Unit at the University of Kent to produce a guide to estimating unit costs for children's social care aimed at social services departments. It is called *Unit Costs – Not Exactly Child's Play*.[1] The

[1] Beecham, Jennifer (2000) *Unit Costs – not exactly child's play: a guide to estimating unit costs for children's social care,* published jointly by the Department of Health, the Personal Social Services

guide contains a number of worked examples, useful definitions and references for further reading. It goes into many of the issues discussed in this guide in greater depth.

The example in the box on the previous page is based on quite long visits (around 2 hours each) so that the number of visits achieved by each home visitor is quite low. A more typical standard home visit by a health visitor would last around half an hour, but health visitors' salary costs are higher, so that a typical health visitor home visit costs on average £25 to £30. (Netten et al 2000).

The second example in the box on the next page shows how to calculate the costs of running a family centre.

Having calculated the total cost of running the family centre, you now need to allocate the different elements of the costs to the services the centre provides. You will find that centre managers and staff usually have a reasonable estimate of the proportion of staff time devoted to different activities. With visiting services, you need to find out whom they are serving. If they are integrated with other uses (for example speech therapists work with the children using the day care, and other children do not come in specially to see her) then it should be counted as part of the day care service. Otherwise, it might be a service in its own right.

In the case of our imaginary centre, the following activities take place:

- Full-time day care (9 hours a day) for 32 children
- Parent and toddler group (twice a week)
- Parenting classes
- Parents' groups
- Other support for parents
- Personal development training for adults
- Health education for adults
- Crèche (serving parents attending the above, but also available to casual users)
- Sessions with specialist services (speech and language therapy and psychologist)

In the second box below (on page 18) there is an illustration of how to calculate costs for the individual services that make up the family centre's activities. Generally, you can allocate staff costs to the particular activities that the staff are involved in, while sharing out between services the costs of those who deliver more than one service. The example only covers two of the above services, because to calculate the remainder would be unnecessary repetition, but it is important to remember that the total cost of all the individual activities has to come to the same total as the total cost of running the centre. All the centre's costs must be attributed to one or other of the services provided. Down time (eg staff meetings) has to be shared across all services.

It is not an output in its own right, but only comes about in the context of the production of other outputs by the centre.

Research Unit at the University of Kent and the Dartington Social Research Unit. Available free from PSSRU (01227 827773).

Example 2: A Family Centre:
(a) Total costs

Annual cost of premises[1]	£32,500
Heating, light, maintenance, cleaning etc[2]	£52,000
Stationery, toys, food, drinks etc	£20,000
Staff costs including NI and superannuation for all staff based in the centre	£420,000
Parenting course tutors (2 hrs a week x 36 weeks a year x £23 an hour)	£1,656
Toy library sessions (1 x 3 hour visit per week @ £50 a visit)	£2,600
Speech and language therapist sessions (20 a year) @ £100 per 3 hr session	£2,000
Child psychologist sessions (12 per year) @ £100 per 3 hr session	£1,200
Adult and health education tutors (3 hrs a week @ £30 an hour x 36 weeks)	£3240
Central services and Sure Start overhead costs	£40,000
Total annual cost of centre	**£575,196**

[1] If the premises are rented this should be the cost of the rent and rates, otherwise a reasonable rule of thumb is to take 6-8 per cent of the capital value of the building and its furniture and fittings. This is the value of the alternative use to which the capital sum could be put, or the opportunity cost. This figure is based on a capital value of £500,000.

[2] The building may be charged independently, or the parent organisation may levy an agreed charge on the Sure Start programme. Otherwise you will have to estimate based on a share of the expenditure by the part of the organisation running the centre. Most family centres will have cost centre information that provides this information.

Two things should be noted from the examples in the illustration. In the case of the anti-smoking course, the costs of the tutor account for less than half of the costs. This is likely to be the case in most of the services and activities which are aimed at parents. In the case of the day care, the need for high adult/child ratios means that staff costs account for a large part of the total costs. Some costing methods allocate premises costs and other overhead costs according to staff numbers. However, this penalises services which are staff intensive as opposed to those which are floor space intensive, and in the case of a centre, it is the building that is the scarce resource. In the example below, they have been allocated according to a time/floor space formula. Thus, the day care accounts for 70 per cent of the activity of the centre on this basis

Example 2: A Family Centre:
(b) Allocating costs to services

Service 1: Day Care

Day care staff	£256,000
Share of other staff	£ 23,000
Share of speech therapist	£ 1,200
Share of psychologist	£ 300
Food, drink, consumables	£ 12,000
Share of overhead costs (70%)	£ 28,000
Share of premises costs (70%)	£ 59,150
Total cost of service	**£379,650**
No of days per year on which service operates	249
Number of full-time equivalent places available per day	32
Average number of places vacant at any one time	0.8
Cost per full-time filled place per day[1] (£379,650 ÷ [249 x 31.2])	**£48.87**

Service 2: Anti-smoking course

Tutor (8 sessions @ £30 a session)	£240
Supporting materials	£15
Share of other staff and centre overheads	£100
Share of premises costs	£105
Crèche places (5 children per session for two hours per child x £3.20 an hour)[2]	£256
Total cost of course	**£716**
Cost per participant (based on 10 participants)	**£72**

[1] These costs are higher than we might expect for a typical day care place. £40 might be more typical.
[2] You will have estimated these costs using the method applied to the day care places above

(one large plus two small rooms for 2241 hours a year). The anti-smoking course occupies one smaller room (around a quarter of the space occupied by the day care)

for 16 hours in total. Its share of the centre's overheads is calculated on the same basis.

You can use the same process to allocate the centre's costs across all the other services. Some of this will involve internal recharging between headings, as with the speech and language therapist's time spent in the day care setting, and the course participants using the crèche.

You will inevitably find that there are some items where it is difficult to find the costs. Generally speaking, if a cost item is difficult to obtain, and moreover is likely to make only a small contribution to overall costs, then you should ask yourself:

- Are there national data on the cost in question?
- Can you make a reasoned "guesstimate" based on your own knowledge or experience or that of colleagues?

If the answer to either of these questions is "yes" then use that figure as the basis for your calculations. If the answer to both the questions is "no", then ask yourself does it matter. Put in an arbitrary (but not unreasonable) figure and see whether it makes much of a difference to the If it does make some difference, then try asking other evaluators how they have tackled this issue. Use the discussion area on the National Evaluation of Sure Start website. If it is an important issue, then all local evaluators may be grappling with it, but some may have solved it, and you can learn from their experience. In extremis, you might find that that four or five local evaluators have solved the problem and have come up with similar estimates for a particular cost item (the cost of providing transport for hospital appointments say). You could then treat these estimates as though they were a national average estimate and proceed on that basis.

When you are putting together your estimates of costs, one useful (and entirely unscientific) rule of thumb is:

- Take the salary costs (hourly, weekly, monthly or annual as appropriate) of providing a service and multiply them by 1.8
- Compare the resulting figure with the costs that you have calculated
- If your figure is between 25 per cent below and 25 per cent above the rule of thumb figure, you can assume it is probably right.
- If your figure is more than 25 per cent above the rule of thumb figure, then double check it, because it may be wrong, unless you know that it requires specialised premises or equipment.
- If your figure is more than 25 per cent below the rule of thumb figure, check to see whether you have included all the indirect and overhead costs that you should have.

The rule of thumb is based on experience. Most cost calculations come out at a figure within these limits.[2] However, not all will. Some services may have low overhead costs. For example, some people providing services may work from their homes rather than an office base, which results in savings in indirect costs. Similarly, some

[2] Netten A and Curtis L (2000) *The Unit Costs of Health and Social Care 2000* (and volumes from earlier years) provide examples of calculation of unit costs in the health and social care fields.

services (for example specialist services for children with physical impairments) may require specialised premises or equipment, so that the non-staff costs represent a higher than average component. However, you can use the rule of thumb as a way of checking that you are on the right lines. If it does not, then ignore it altogether.

Step 4: Relate the unit costs of services to outcome targets

Sure Start programmes are working within a framework of targets which are to be achieved during the lifetime of the programme. These targets can only measure the success of the programme in very partial terms, since the real outcomes the programme is trying to influence are only likely to be achieved once children move into adolescence and adulthood. It is important to keep this in mind, since the benefits of programmes are not expected to exceed the costs during the first years of its life.

There is inevitably an element of guesswork in this stage of the process, but you can always try alternative assumptions to see how sensitive your final results are to the way in which the attribution is done.

Let us take a home visiting programme by way of illustration. The targets it is seeking to influence are the first two of the national Public Service Agreement targets (the ones related to child protection and smoking during pregnancy). In addition, a programme may have set itself local targets. Examples might be an improvement childhood immunisation rates, a reduction in gastro-enteritis among infants and an improvement in the proportion of infants who are recorded at baby clinics or by health visitors as achieving all their normal development milestones, and a reduction in the number of incidents of domestic violence between partners. An area which has chosen these targets might attribute the costs of their home visiting programme as follows:

- 20 per cent to child protection
- 10 per cent to smoking reduction
- 15 per cent to immunisation
- 15 per cent to gastro-enteritis
- 20 per cent to development milestones
- 20 per cent to domestic violence

Note that these proportions will vary between programmes, because problems differ in their incidence between areas. You will need to agree with local programme managers the proportion of each service which is working towards each target. Note that the total level of attributions must add to 100 per cent. Services are not being provided as an end in themselves. They are always trying to achieve something. But what they are trying to achieve will vary from area to area. Some Sure Start programme areas already have low rates of gastro-enteritis, so they would not have a target of this kind. Others have problems of substance abuse or mental health problems among parents and might give a higher priority to these. The key thing about targets is that they should be measurable. They need not be objectives in their own right, but they should be factors that are likely to be associated with improvements in the health, social, economic or emotional well being of children and families.

Some of the targets, both national and local, will be addressed by more than one service. For example, there might be a specific anti-smoking initiative in a particular

area, and the home visiting serves to reinforce that. Child protection is likely to be a feature of most services, even if only a minority part in all cases.

If you set up a table of the kind illustrated below using your own local service targets, you can provide an estimate of the costs of achieving particular targets across the whole of your programme.

You put the costs (including indirect costs, costs funded by other sources and overhead costs) of each service in the second column, and the proportion of each service attributed to each target in the appropriate cell. You then multiply the total cost of the service by the attributed proportion to get the costs for each service related to each target. You then add down the column to find the total costs assigned to each of your target areas. (It is a good idea at this point to check that the total of all the columns is the same as the total of all the services, even if you are using a spreadsheet you can find that your proportions do not add to 100 per cent, or you make an error in transcription.)

You can then look to see exactly what has been achieved under each of these target areas and see what the costs per unit achieved are. You will have to use an element of judgement in discussion with programme managers about which unit you use. Thus although national targets are set in percentage point terms, you might want to think about them in terms of individual case numbers. Thus, your local child protection target might relate to the number of cases on the register (as opposed to the national target which is looking at re-registrations). Similarly, you might want to look at the number of children who are receiving all their immunisations as well as the proportion, because you should be interested in the cost of achieving each case.

Taking immunisations as our example here, we can see that the total cost of supporting this target is £11800 in the year in question. A smaller Sure Start area will have around 100 children in each of the target ages (babies under a year old, one year olds, two year olds, and three year olds). Let us say that this target relates primarily to infants under a year old and to two year olds. Before Sure Start began, 70 per cent of babies and 67 per cent of two year old had received all their appropriate immunisations. The latest figures show that the proportion of infants receiving all immunisations has gone up to 78 per cent, and the proportion of two year olds has gone up to 69 per cent. This represents eight infants and two two year olds, or ten cases in all. This means that the programme has spent £1180 per case. The question you now have to ask is does this represent value for money.

HOW TO RELATE COSTS TO TARGETS AT A LOCAL LEVEL

SERVICE	TOTAL COST OF SERVICE	COSTS ATTRIBUTED TO INDIVIDUAL TARGETS								
		Child protection (national)	**Child protection (local)**	**Smoking during pregnancy**	**Avoidance of speech and language problems**	**Workless households**	**Immunisation**	**Gastro-enteritis**	**Domestic violence**	**Development milestones**
Home visiting	£67,000	*.10*	*.10*	*.10*			*.15*	*.15*	*.20*	*.20*
		6700	6700	6700			10050	10050	13400	13400
Child care	£379,650	*.10*	*.20*		*.25*	*.35*				*.10*
		37,965	75,930		94,912	132,877				37,965
Family Centre	£124,796	*.05*	*.15*	*.10*	*.15*	*.15*	*.05*	*.05*	*.20*	*.10*
		6240	18,719	12,479	31,198	31,198	6240	6240	24,959	3500
Toy library	£12,000				*.33*					*.66*
					4000					8000
Parenting classes	£3750	*.10*	*.20*	*.10*	*.25*				*.10*	*.25*
		375	750	375	938				375	938
Play bus	£8000		*.05*		*.35*					*.60*
			400		2800					4800
Community cooks	£7500					*.15*		*.65*	*.20*	
						1125		4875	1500	
COSTS DIRECTED TOWARDS EACH TARGET		**51,280**	**102,499**	**19,554**	**133,848**	**165,200**	**16,290**	**21,165**	**40,234**	**64,403**

Step 5: Compare the costs and outcomes of Sure Start services in your area with those of other providers

This stage in the process is known as benchmarking. It provides a straightforward way for you to assess whether your programme looks as though it is in line with other areas and providers in terms of either costs or outcomes. Since each area is different, and local needs and circumstances differ, we should not expect either costs or outcomes to be the same in all areas. On the other hand, if costs or outcomes are unusually low or high, this means that the programme should be asking why. It may be that a deliberate decision was taken to go for a more expensive method of service delivery in the belief that this would be more effective at delivering outcomes. In this case, you need to assess whether early indications support that belief. On the other hand, if your service delivery is unusually cheap, you might start to question whether it is sufficiently well resourced to be effective.

Therefore, once you have established the unit costs of the services you are looking at, you will need to think about how they compare with other providers, either in other Sure Start programmes, or more generally. In the case of our imaginary family centre, how do the centre's costs compare with those of other providers? If they are higher is this because of the additional services (eg speech therapist), or better staffing ratios? If the centre's costs are similar to those of other providers in spite of offering a wider range of services you might want to try and work out why because it suggests that the centre is more efficient than other providers, and understanding the sources of efficiency is quite valuable, because you can often apply the lessons more widely. Does the centre keep vacancy rates low? Does it have stable staff? Does it have low sickness rates? These sorts of questions will help your programme to determine how well it is using its resources.

1. Comparing costs

There are four broad ways in which you can compare the cost of service delivery in your area with the costs of other providers:

- Find out the costs of other local providers, either statutory, private or voluntary.
- Share information with other Sure Start evaluators
- Use information from national sources, for example *The Unit Costs of Health and Social Care,* information collated by the Audit Commission or the Chartered Institute of Public Finance and Accountancy, or information published by government departments such as the Department for Education and Skills or the Department of Health.
- Look on the National Evaluation website for links to sources of information about costs and outcomes. These links will be developed gradually over the coming months as the website becomes fully operational

Remember that there are errors in everyone's calculations, if only because there have to be some assumptions underpinning them. Thus if your home visits cost £35 and another programme's cost £32 these should be treated as roughly equal, but if another programme's is £18 you will want to find out why. As a rule of thumb, you should probably ignore cost differences of 10-15 per cent either way. They may represent efficiencies, but they may be due to slight differences in assumptions. Differences of 25 per cent or more should be looked at, however.

2. Comparing outcomes

There are four parts to comparing outcomes:

- How much does it cost to achieve a particular target objective?
- Are other ways of trying to achieve the same targets more successful for the same cost, or are there cheaper means of achieving the same level of outcome?
- How successful is your area by comparison with other areas in terms of meeting its targets, either national or local
- What methods are they using? What is the cost to mainstream services of delivering the same objectives?

Returning to our imaginary programme set out in the table, we calculated that the cost of increasing immunisation rates was around £1180 per additional child immunised. This figure looks rather high. You will probably want to suggest to your programme that there may be cheaper ways of obtaining the same level of take up. For instance, you could offer a payment of £50 in Boots vouchers to each baby that completes its immunisations. With around 130 babies a year, this would cost a maximum of £6500 or less than half the total costs incurred using existing methods. Provided an additional six babies are vaccinated, this approach would be more cost effective (but of course the benefits still might not outweigh the costs, see below).

As a general rule the costs of achieving target outcomes for families from Sure Start areas is likely to be higher than mainstream service costs averaged across the population as a whole, because families in Sure Start areas have a higher incidence of disadvantages. But you should take note where the costs are a long way above those of the mainstream, because this suggests that other approaches might be more effective.

Step 6: Identify any savings (or additional costs) that derive from the provision of Sure Start services

This is the most difficult part of a local evaluation, and in many cases it will not be feasible. Having established what has actually been achieved, you need to consider the implications of this success for the provision of other services. For instance if a service identifies the need for specialist mental health services, there are increased costs from the provision of these services in the short term. In the longer term, the hope would be that this would generate savings, because earlier intervention could avert later problems and more costly intervention once a problem had become more intractable.

Sometimes there will be clear links to savings, but these are likely to be the exception rather than the rule. The real problem for local evaluations is that it is impossible to establish what would have happened in the absence of the programme (sometimes called "the counterfactual"). For instance, if hospital admissions for babies with gastro-enteritis fall, you do not know how far this fall can be attributed to the intervention of Sure Start, and how far it would have happened anyway. In the case of the national evaluation, the experience of Sure Start areas will be compared with the experience in other similar areas, and with the experience of a national sample of children.

You can produce 'what if' estimates: what would be the value of the savings if all the improvement could be attributed to Sure Start, but it is important to be clear that the figure is a maximum estimate. So, for example, say that the number of hospital in-patient days for babies from the Sure Start area has fallen from the pre-Sure Start baseline figure by a total of 20 days; you could estimate the maximum potential savings from this fall. If you cannot obtain local figures from your hospital trust, you can use the national average cost of a paediatric in-patient day from *The Unit Costs of Health and Social Care* (currently £310).

You should only expect to be able to calculate savings from a minority of your services and targets, but doing so nonetheless remains a useful discipline. For instance, returning to our imaginary programme with the immunisation target. We have established that an additional ten children have received immunisations. If we assume that each additional child immunised reduces the probability that those ten children will be infected by one of the illnesses against which they have been immunised from 0.7 to 0.1[3], and reduces the probability that the remaining pool of non-immunised children will be infected from 0.7 to 0.65. This reduces the number of infections by six among the extra immunised children and a further one among the remaining non-immunised children, who are exposed to a lower level of risk. If each case involves three GP visits, and one in every ten cases involves a two-day stay in hospital, the savings might be:

> 7 x 3 GP visits at £19[4] a visit = £399
> 7/10[5] x 2 nights hospital stay at £310 a night = £434
>
> therefore total savings: £833 or £83 per additional child immunised

There is a small probability that measles can leave children with brain damage, with consequent lifelong care costs. Children who catch polio often have physical impairments. German measles in pregnant women can result in the birth of babies with brain and sensory organ damage. Where a potential outcome has a small probability, but a large cost if it happens, it may be worth calculating the potential savings from this source. When we are looking at long-term savings we need to take into account the idea that costs and benefits occurring further in the future are worth less than those which occur in the present.

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[3] The probabilities used here are imaginary. You should be able to establish exactly what the true probabilities are. They are likely to be well established in the public health literature.

[4] National average cost of a GP consultation from Netten et al

[5] There are seven fewer cases and our imaginary probabilities are that each case has a 1/10 chance of hospitalisation. Therefore there is a 7 x 1/10 probability that there will be savings in hospital costs if seven cases are avoided.

DISCOUNTING

Generally, a benefit nearer in the future is valued more highly than one that does not take place until many years hence. This is particularly the case where the targets for an intervention are children, and earlier improvements may be a necessary step to achieving improvements in longer-term outcomes. But investing money in a programme producing future benefits means a reduction in consumption now. Generally, people are only willing to reduce their current consumption if the value of the potential future benefits is greater than the value of the present consumption that is being foregone. For this reason, it is standard practice in cost-benefit evaluation to apply a discount rate to future costs and benefits after first adjusting for the effects of inflation. The formula for doing this is:

> (value of cost or benefit occurring in year n) ÷ (level of prices index in year n ÷ level of prices index in base year) ÷ $(1 + r)^{n-1}$

In this formula the appropriate price index may be the well known Retail Prices Index (RPI) which measures the prices of goods and services purchased by households, or it could be the GDP deflator, which measures the prices of all goods and services bought in the whole economy, including goods and services bought by the public sector and businesses. In the formula r is the discount rate. For UK government spending the rate used is currently 6 per cent a year, so that the value in the formula is 1.06.

This is chosen as an approximation to the target rate of return on investment in the private sector less the risk premium that private investment is confronted with. Other projects competing for Government funds will have to apply this rate, and it is therefore correct to apply it to Sure Start.

The effect of discounting is to reduce future costs and benefits compared with the same amounts today. Using the above formula, we can deduce that a cost of £5000 incurred in year 2 with inflation at 3 per cent would have a discounted (ie base year) value of £5000÷ 1.03 ÷1.06 = £4579. Similarly, increased earnings of £1500 a year in year 25 with 2½ per cent inflation per year on average between the base year and year 25 would be worth £1500 ÷ (177/100) $\div 1.06^{24}$ = £209 in base year terms.

In fact, for outcomes with a low probability, the additional savings per case are small even where the potential costs are high. In our imaginary example, you have already established that each case costs £1180, but the maximum savings are well under £100.
Thus, it is reasonable to conclude that the benefits from this programme do not outweigh the costs and it is not cost-effective.

Step 7: Writing your report

Having completed your calculations and analysis, you need to produce a report for your local programme. Your main task is to provide a report which helps in local decision-making, and the mangers of your programme may have particular requirements, but if they leave it up to you, the following structure should deliver what is needed in most cases:

1. List the services you are providing in turn and the full resource cost of each. Just provide the estimate (eg a home visit costs £48) and put the details of the calculations in an annex

2. Explain the relationship between individual services and local and national targets

3. For each target provide details of how much it costs with an indication where appropriate of key sources of costs

4. How do the costs of your local programme compare with other areas or with national patterns

5. Where savings are apparently being generated give an indication of the scale of these savings

6. What are the positive achievements locally in terms of cost-effectiveness

7. Which services do not appear be cost-effective, either because they are apparently unusually expensive or because they do not appear to be influencing outcomes on a sufficient scale

8. Add an annex where you show the details of your calculations and the assumptions you have used.

Further Reading

There are a large number of books about cost-benefit analysis, of which cost-effectiveness forms a part. However, they are generally aimed at economics students and lay a great deal of emphasis on explaining the theoretical framework. They are mostly more likely to confuse than to help. One American textbook aimed at public policy students rather than economics students, and as a consequence rather more comprehensible is Gramlich EM (1990) *A Guide to Benefit-Cost Analysis,* (2nd edition), Waveland Press, but as relatively little of it is relevant, it may be better to try and borrow it rather than buy it. For a useful introduction to the economics of services for children in a British context it is worth reading Knapp M And Lowin A (1998) Child Care Outcomes: Economic issues and perspectives, *Children and Society* 12 (3). *Children and Society* is published by the National Children's Bureau.

Dr Jennifer Beecham's *Unit Costs: Not Exactly Child's Play* referred to above is more or less indispensable. It has step-by-step guides to calculating unit costs in the context

of children's social services, but it is easy to see how to adapt the model to slightly different services.

A guide produced in 1999 by the Home Office for local evaluators in the Crime Prevention Programme is *Crime Reduction Programme: Analysis of costs and benefits: guidance for evaluators* by S Dhiri and S Brand. Although this is operating in a different context, it is intended for local evaluators without a background in economics. It may clarify some of the issues encountered by Sure Start evaluators. It is available on the Research and Planning Unit section of the Home Office website www.homeoffice.gov.uk.

The Personal Social Services Research Unit at the University of Kent produces an annual volume *The Unit Costs of Health and Social Care.* The latest issue is the 2000 volume by Ann Netten and Lesley Curtis and this has the most up-to-date national costs. This is likely to be most useful in calculating the value of savings. However, some of the back issues contain articles on how some of the individual costings have been approached. In particular, the following may be useful:

For those who are interested in the best American studies of the cost-effectiveness of early childhood interventions, the RAND Corporation of California commissioned an overview Karoly LA, Greenwood PW, Everingham SS, Houbé J, Kilburn MR, Rydell CP, Sanders M and Chiesa J (1998) *Investing in our children: what we know and don't know about the costs and benefits of early childhood interventions,* RAND. This is also available free from the RAND website, although the book is more convenient.

The following references provide some information about the costs of some of the things that Sure Start is seeking to prevent. They are useful indicators, but not necessarily wholly representative, so use them with discretion:

Abrahams C (1994) *The Hidden Victims – Children and domestic violence,* NCH Action for Children.

Audit Commission (1999a) *Missing Out: LEA Management of School Attendance and Exclusion*

Audit Commission (1999b) *Children in Mind*

Audit Commission (1996) *Misspent Youth: Young People and Crime*

Department of Health (1995) *Child Protection: Messages from research*

National Commission of Inquiry into the Prevention of Child Abuse (1996) *Childhood Matters,* The Stationery Office

Parsons C (1996) *Exclusion from School: the public cost*, Commission for Racial Equality

Scott S, Knapp M, Henderson J and Maugham, B (1999) *The Price of Social Exclusion: the cost of anti-social children grown up*, Mental Health Foundation

Social Exclusion Unit (2000) Report of Policy Action Team 12: *Young People*

Stanko EA, Crisp D, Hale C and Lucraft H (1998) *Counting The Costs*, Crime Concern