Learning report:

Looking for value in hard times

How a new approach to priority setting can help improve patient care while making savings

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The Health Foundation
Inspiring Improvement

Identify Innovate Demonstrate Encourage

Contents

Commentary

The NHS is under greater pressure than ever to secure high-quality, value-for-money health services. At the same time, commissioners and providers are expected to involve stakeholders – including patients and the public – in decisions.

As clinical commissioning groups in England begin to take on their new responsibilities, they will need tools that help them meet these demands – and which enable them to demonstrate that they have done so. This will be particularly the case where they have to take difficult decisions that may involve disinvestment.

This report describes how NHS Sheffield used a new approach, called Star ('socio-technical allocation of resources'), to re-allocate resources within its eating disorder services.

The Star approach emerged from a programme of research into value for money in healthcare carried out by Professor Gwyn Bevan and his team at the London School of Economics and Political Science (LSE) and funded by the Health Foundation.

At the time the programme started in 2005, it was not expected to develop tools or products; rather, it was exploratory work to understand how a health economist's view could add to our knowledge of how to improve the quality and value of healthcare.

As the work progressed, new techniques to look at comparative value of healthcare options were developed. These were used in conjunction with an innovative decision-conferencing approach to involving stakeholders in decision making.

It soon became clear that something of real practical value was emerging and we are therefore delighted that this methodological research has been applied in practice.

As this report shows, by using the Star approach, NHS Sheffield were able to agree changes to their eating disorder services with clinicians, service users and other stakeholders. The changes they have made are expected to improve both patient care and value for money, with the project showing potential for substantial savings.

The Health Foundation and LSE are currently working with a commercial provider and a group of clinical commissioning groups to pilot a Star toolkit, comprising a tool to aid deliberative decision making and a training module. The toolkit will be made publicly available, free of charge, and will enable a step forward in transparent decision making and planning resource use. However, implementation of changes in service delivery, to achieve better value healthcare in the long term, will rely upon the negotiation skills, good management and tenacity of healthcare providers, planners and commissioners.

This report describes a methodology to inform rational decision making – and its application in practice. We hope that it will both interest readers and encourage them to try the approach for themselves, using the forthcoming Star toolkit.

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1 Introduction

This report describes a new approach to priority setting called Star. The approach combines value for money analysis with stakeholder engagement. This allows those planning services to determine how resources can be most effectively invested, while the engagement of stakeholders means the decisions are understood and supported by those most affected. The report sets out how NHS Sheffield used Star to re-allocate resources within its eating disorder services. By early 2012, indications suggested the new strategy would reduce spending on inpatient services by more than 50%.

Setting priorities, allocating resources, commissioning and redesigning services will all take place in a harsh financial climate for the foreseeable future. At the same time, the NHS must strive to meet ever-rising demand and to improve the quality of patient care. It must involve a wide range of partners – including local people and communities – in its decision making and must be able to show that the way it has allocated resources is evidence based, transparent and systematic.

Change is difficult, especially where disinvestment in services may be an option, and these challenges may appear all the more testing as responsibility for commissioning NHS services in England is passed to new organisations – clinical commissioning groups (CCGs).

This report describes a new approach to priority setting called Star (socio-technical allocation of resources). The approach is designed to help commissioners and others pinpoint where they may be able to get additional value from their resources by using them more effectively.
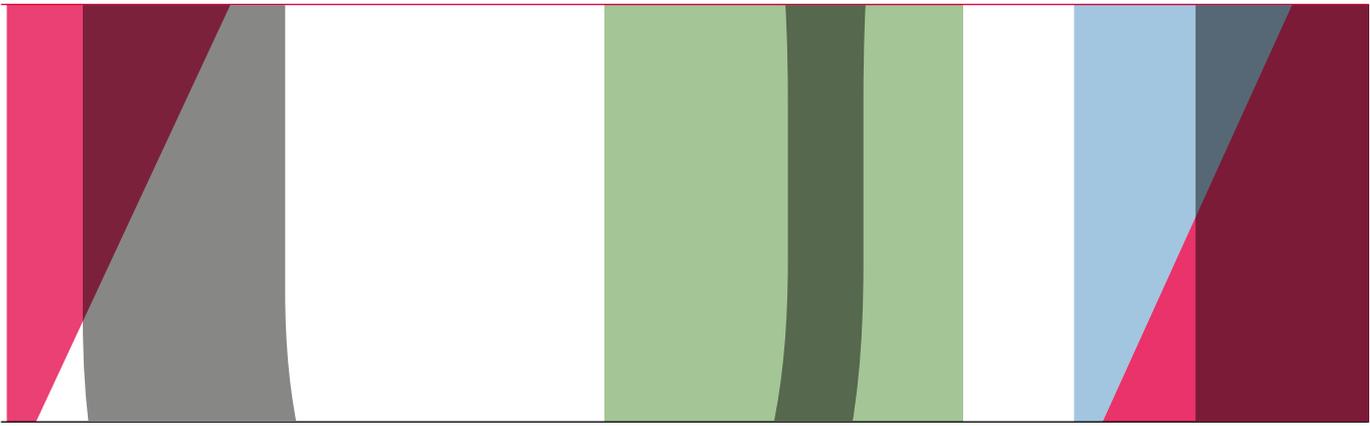
It works by producing simple visual models, developed interactively with stakeholders, so that everyone involved can understand the nature of the choices to be made, and the disadvantages of not changing current practices.

The Star approach has several unique characteristics and considers the scale of impact that interventions have on costs and on a population's health. This enables commissioners and providers to focus on reducing spending where total costs are high but total benefits are low, and increasing spending on activities that produces high value at low cost.

The Health Foundation funded the project to use the Star approach in practice, which was carried out by a research team from the London School of Economics and Political Science (LSE) working with NHS Sheffield. It builds on and complements the LSE's earlier work with NHS Isle of Wight (see *Commissioning with the Community*[1] for more details). In contrast with the Isle of Wight, where the primary care trust had extra money to invest, NHS Sheffield wanted to increase health benefit without additional spending.

The Star approach involves patients, clinicians and other stakeholders gauging the relative benefits of interventions on a consistent basis. It avoids a situation where commissioners have only piecemeal data on the benefits of an intervention and are consequently working in the dark. This lack of data can make it hard to engage people and convince clinicians, patients, carers and the general population that changes are needed.

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1 www.health.org.uk/publications/commissioning-with-the-community/

The approach focuses attention on identifying key changes that are likely to have the greatest impact on population health. It has been shown to work not only in situations where resources are growing but also where they are not. It has also produced results where purchasers and providers form separate entities, and where (as in the Isle of Wight) they are part of the same organisation. This shows that the approach has the potential to be useful both in the NHS in England and also more widely.

The Health Foundation is currently developing a Star toolkit that will help clinical commissioning groups, health boards and others to make decisions on setting priorities, allocating resources and redesigning and commissioning services. For more information, email star@health.org.uk

Context

Obtaining value for money has always been an important aim for the NHS, as has a commitment to transparent and rational priority setting. The NHS Constitution also establishes as a guiding principle that the NHS should work in partnership with other organisations.

The NHS has an explicit duty to ensure that patients and the public have a say in how services are planned. The Constitution also gives them the right 'to be involved, directly or through representatives, in the planning of healthcare services, the development and consideration of proposals for changes in the way those services are provided, and in decisions to be made affecting the operation of those services'.[2]

Engaging stakeholders in decisions

The government argues that 'commissioning has been too remote from the patients it is intended to serve', and says 'We want local people to have a greater say in decisions that affect their health and care and have a clear route to influence the services they receive'.[3]
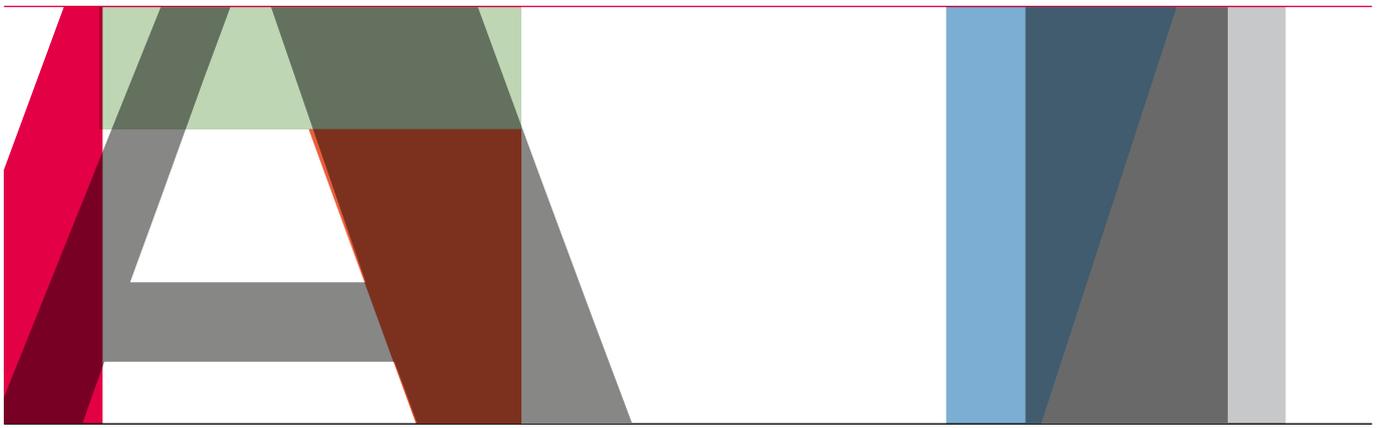
CCGs must demonstrate 'meaningful engagement with patients, carers and their communities' as part of the authorisation process. They must include 'mechanisms for gaining a broad range of views then analysing and acting on these. It should be evident how the views of individual patients are translated into commissioning decisions'.[4]

Every CCG must publish an annual commissioning plan specifying how it intends to involve patients and the public in commissioning decisions. CCGs have a duty to involve the public in any changes that affect patient services, not just those with a 'significant' impact. The NHS Commissioning Board will assess how effectively CCGs do this.

2   Department of Health (2012). *The NHS Constitution for England*. London: Department of Health.

3   Department of Health (2010). *Liberating the NHS: Local democratic legitimacy in health*. London: Department of Health.

4   Department of Health (2011). *Developing Clinical Commissioning Groups: Towards authorisation*. London: Department of Health.

Improving productivity in the NHS

Chief executive Sir David Nicholson has committed the NHS to finding £15–20bn in efficiency savings by 2015 under the Quality, Innovation, Productivity and Prevention (QIPP) programme. With economic recovery weak and prospects for growth being revised downwards, it is likely that even after 2015 NHS funding will continue to be tight. QIPP began under the previous government, and the current government has promised it will 'continue with even greater urgency'.[5]

QIPP is not intended to cut budgets or reduce services but to improve productivity: the NHS must derive more value from its resources during a period when budget increases will not match rising demand. Redesigning services and modifying pathways will be an essential part of every organisation's QIPP programme.

In order to achieve authorisation, CCGs will need to have 'clear and credible plans' for how they will continue to deliver the local QIPP challenge for their health system.[6] These plans must show how CCGs will 'take responsibility for service transformation that will improve outcomes, quality and productivity, whilst reducing unwarranted variation and tackling inequalities, within their financial allocation'. The Commissioning Outcomes Framework will measure the health outcomes and quality of care – including patient experience – that CCGs achieve.

The efficiency savings needed are difficult to make and, in practice, will require commissioners to focus their efforts on a small number of priorities. To do this when planning how best to prioritise resources, they will need tools to identify which options offer the best value for money and maximum health gain.

Existing tools and techniques to help set priorities

A number of proprietary and locally developed methods for setting priorities are already available to help redesign services. Some of these tools and techniques assist in investigating variations in patterns of spend or activity. Others link expenditure and health outcomes, while a few allow testing of different mixes of treatment methods for specific diseases.

All have limitations. Methods such as cost per quality-adjusted life year (QALY) are theoretically sound and evidence based but can be difficult to grasp for those without an understanding of health economics, making them unsuitable as a basis for meaningful engagement with stakeholders. Other tools that are easier to understand tend not to draw on robust theory systematically.

Research suggests that despite a large variety of tools and techniques on offer, their adoption has been limited. Where the tools are used, it is often restricted to decisions at the margin rather than prioritising existing expenditure.

The Star approach is different from existing methods because, as the next section explains, it involves substantial public and stakeholder engagement, linked to an analytical and evidence-based methodology.

5   Department of Health (2010). *Equity and Excellence: Liberating the NHS*. London: Department of Health.

6   Department of Health (2011). *Developing Clinical Commissioning Groups: Towards authorisation*. London: Department of Health

2 What is Star?

Star helps commissioners and others extract increased value by showing them how to deploy their resources more effectively. It does this using visual models, developed interactively with a range of stakeholders, so that they can understand the choices that need to be faced – and why they must be faced.

How is Star different?

Star uses data and health economics in a more robust way than any other pragmatic approach. It enables stakeholders to think differently about the choices they are confronted with. In particular, it helps them to produce, and take into account, epidemiological, clinical and financial information in a coherent framework.
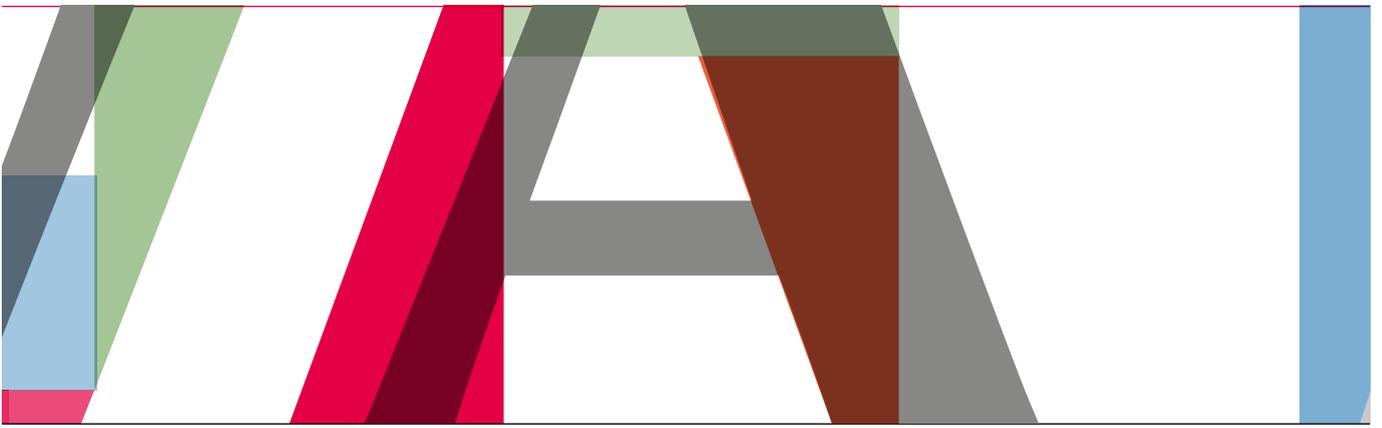
— It uses visual aids to engage stakeholders and help them build, step by step, models that are 'tools for thinking'. As stakeholders produce and contribute the data themselves, they own the model and its results.

— The model leaves an audit trail that makes it clear how epidemiological, clinical and financial information has been used to set priorities. This information is combined in an analytically robust way.

— Because it considers the scale of impact that interventions have on costs and on a population's health, it helps stakeholders and managers focus their attention on key priorities for change.

A socio-technical approach to resource allocation

Making sound decisions that produce desirable outcomes for a population is both a technical and a social process. The decision must be informed by evidence from fields as various as epidemiology, economics, psychology and decision science. But it also involves interpreting that evidence for stakeholders and making their values and priorities explicit when making strategic choices.

Robust decisions rely on stakeholders' involvement. Decision making needs to be designed so that they can see their views being taken into account, and can understand the reasons for the hard choices being made. Failure to constructively involve stakeholders – inside and outside the health system – can mean that a local community's distinctive features are overlooked, or that vital tacit knowledge is neglected. Plans that appear technically sound may never be implemented because of opposition or lack of support from key people.

The importance of public engagement is widely recognised, but mechanisms for effectively achieving it are much less well understood. To address this, Star involves a specific activity called decision conferencing.

Decision conferencing

Decision conferencing involves stakeholders working in groups with an impartial facilitator to explore an issue from different perspectives and decide a way forward. To do this, it makes use of whatever hard data is available. Where data is lacking, it uses participants' knowledge to fill in the gaps. The facilitator feeds both types of information into a computer-based model throughout the decision conference, and the results are displayed in the form of continuously updated visual aids. These visual aids (rectangles of population health gain, value-for-money triangles and efficiency frontiers – see 'How Star works' below) are easy to grasp and can empower participants without technical knowledge to take part effectively.

So, for example, during a Star decision conference, data on an intervention's total cost is combined with stakeholders' estimates of its contribution to health gain. The software then generates simple graphs illustrating the ratio of one to the other – that is, the intervention's value for money. By repeating the exercise for a range of interventions, stakeholders can readily identify those that offer the best value for money by comparing the shape of the value-for-money triangles generated for each intervention.

In this way, decision conferencing can help participants reach a shared understanding of the issues – although they do not necessarily have to reach a consensus. Decision conferencing can foster a sense of common purpose while preserving individual differences of opinion. It aims to find a commitment to a way forward that will be supported by those implementing the actions. Although new to the NHS, decision conferencing has been used successfully elsewhere for over 30 years, especially in the pharmaceutical industry and the environmental sector.

For more information about decision conferencing, see Phillips, LD (1984). 'A theory of requisite decision models'. *Acta Psychologica*, vol 56 pp29–48.

How Star works

For every intervention considered in the decision conference, data is supplied on costs, numbers and types of people benefiting and evidence of health gain. Inevitably there will be gaps in the data, especially for health gain – a problem common throughout the NHS (and indeed, health systems worldwide). Therefore the decision conference's first task is usually to generate this missing data.

Participants follow three steps to assess an intervention's contribution to health gain:

1. They identify how many patients benefit from the intervention in one year, using routinely collected data.

2. Crucially, using data or participants' expert judgement, they create a profile of the intervention's 'average' beneficiary in terms of gender, age, socio-economic background and the severity of their condition.

3. Using value judgements, they assess each intervention's average benefit per patient treated.

The software then uses the data generated to produce three types of simple visual aid. These aids help participants understand the results they are generating and make decision making transparent.
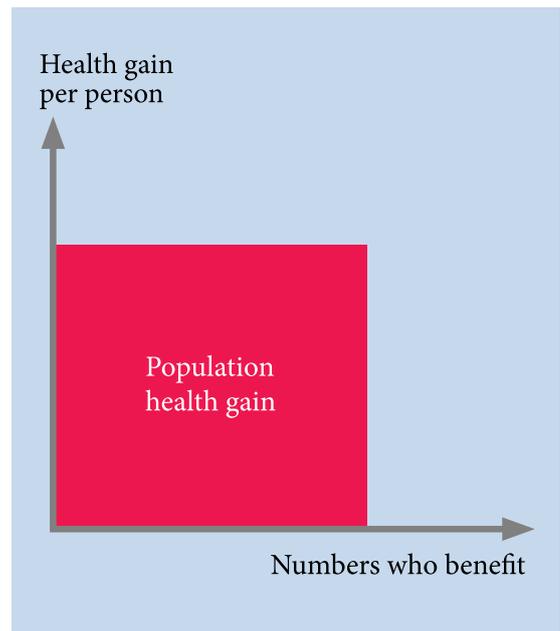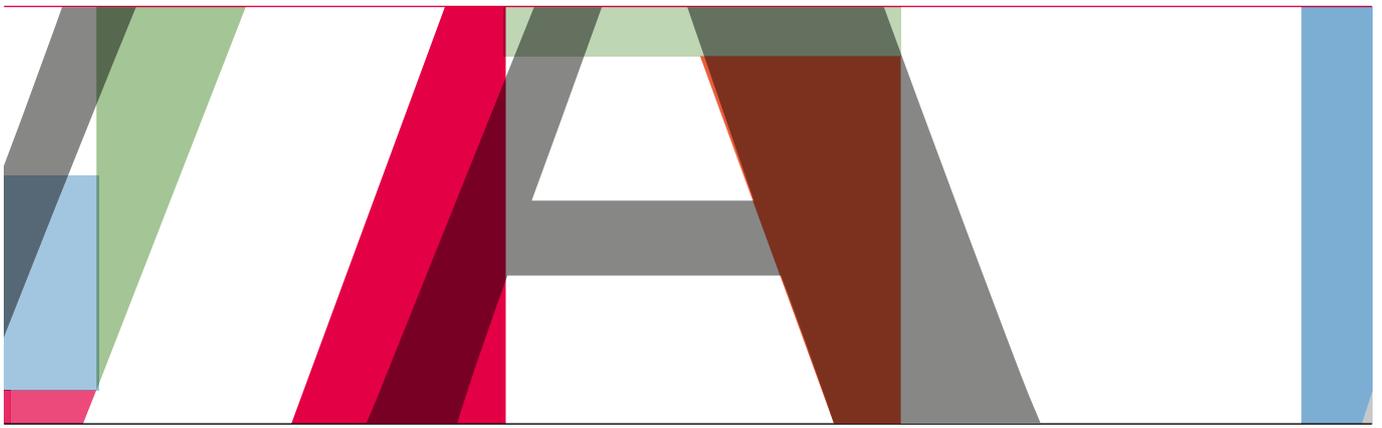
The three visual aids are:

— rectangles of population health gain

— value-for-money (VFM) triangles

— efficiency frontiers.

Visual aid 1: Rectangles of population health gain

This aid shows the population health gain for each intervention on a graph, making comparisons easier. The magnitude of population health gain is determined by the degree of benefit for a typical individual and the number of people who benefit. The bigger the rectangle, the greater the population health gain.

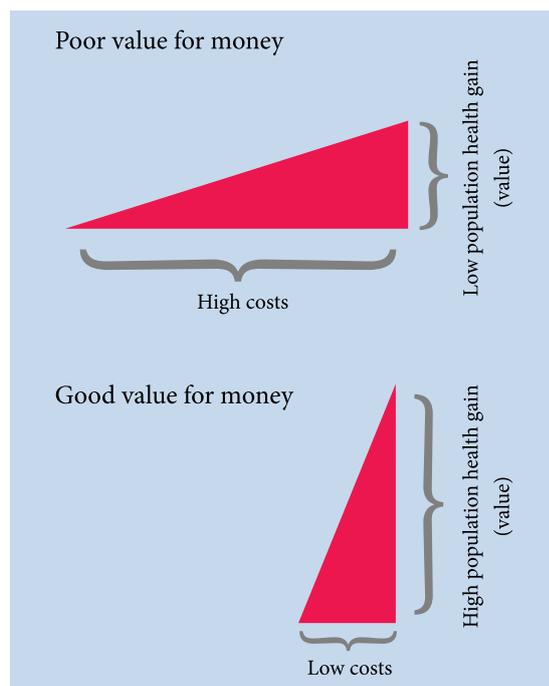**Figure 1: Rectangles of population health gain**

Visual aid 2: VFM triangles

The next step is to calculate an intervention's value for money (VFM). VFM is a ratio of value to cost. VFM triangles are generated by plotting an intervention's value (the vertical side) against its costs (the horizontal side). An intervention's value may equate to its population health gain, but it can also take account of other criteria such as reducing health inequalities. The slope of the triangle's hypotenuse represents the intervention's value for money.

Interventions with high VFM have steep slopes, while those with low VFM have shallow slopes. An intervention represented by a large triangle with a shallow slope invites questions about whether it can be reduced either in scale or cost.
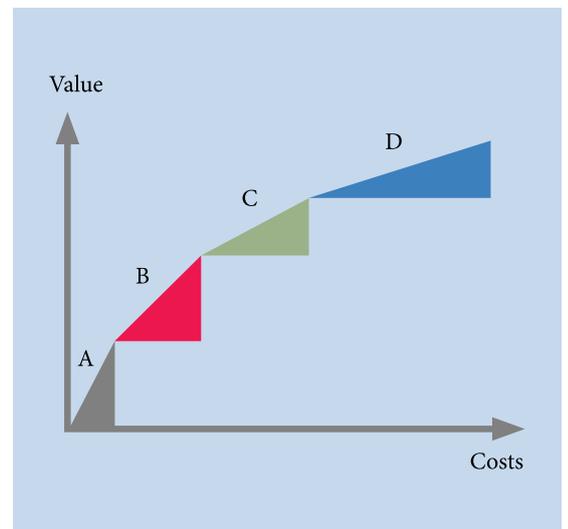
Figure 2: VFM triangles with good and poor VFM

Poor value for money

High costs

Low population health gain (value)

Good value for money

Low costs

High population health gain (value)

Visual aid 3: Efficiency frontiers

Finally, interventions can be ordered according to their VFM. VFM triangles for all the interventions are displayed on the same graph, beginning with those that have the steepest slope (best VFM) and ending with the shallowest (least VFM).

Figure 3: Efficiency frontier for four options

Value

Costs

A B C D

After using each of these visual aids in turn, commissioners have transparent results representing best local knowledge on which to make investment and disinvestment decisions. The visual geometry represents real-life tradeoffs, so it helps clarify decisions and ensures that stakeholders are familiar with the reasoning behind the need for change.

3 | The Star project in Sheffield

Background

The Star approach was piloted with NHS Sheffield, the primary care trust managing the commissioning of health services across the city at that point.

Under new arrangements, Sheffield Clinical Commissioning Group will formally take on these responsibilities from April 2013.
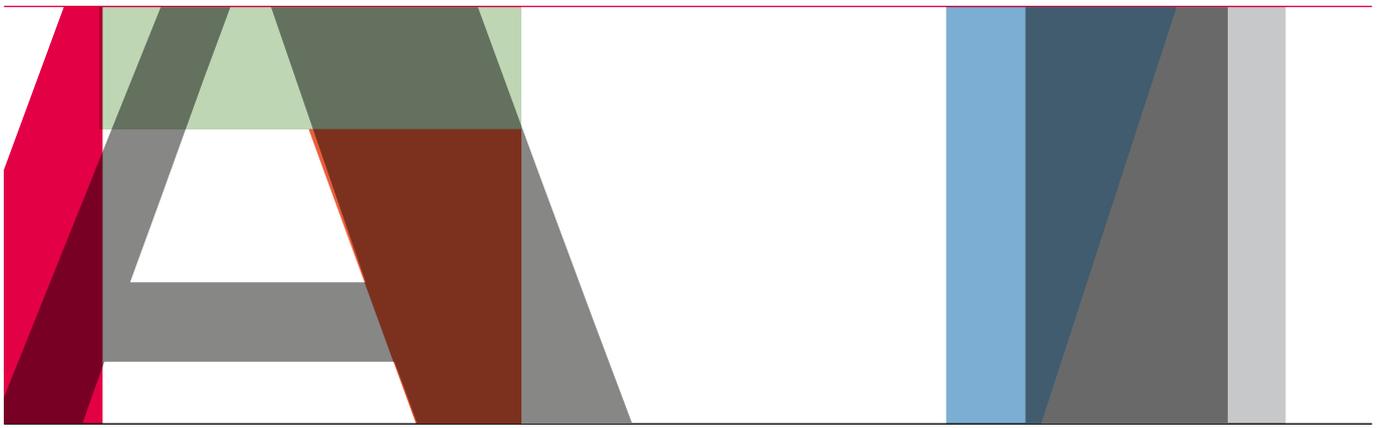
Sheffield: facts and figures

— Sheffield is one of England's eight 'core cities', which form the largest city-based economies outside London.

— NHS Sheffield was established in 2006 when the city's four primary care trusts merged, and it covers the same area as Sheffield City Council. It has an annual budget of about £1bn.

— The population NHS Sheffield serves grew by 8%, to 555,000, in the decade to 2010 – more than the national average.

— The number of people in Sheffield aged 20–29 increased by 33,000, partly due to an expanding student population: Sheffield's two universities have 58,500 students, and Sheffield College has another 26,600.

— By 2020 the population is expected to reach 600,000, with a 13% increase in those aged over 65 and a 14% increase in the number of children.

— In 2009, the proportion of people from black and minority ethnic groups was 17%.

— Life expectancy, at 81.8 years for women and 78.2 years for men, is slightly below the national average.

— Overall health in Sheffield continues to improve, including a narrowing of the gender gap, but improvements in women's health have slowed over the last few years.

Sources:

NHS Sheffield, *Annual Report, Operating and Financial Review 2010/11* (2011).
Sheffield First Partnership, *State of Sheffield 2012* (2012).

Faced with a challenging health economy, NHS Sheffield wanted to better understand the cost effectiveness of different elements of its spending. This would help it continue to fulfil its core objectives and improve the health of people in Sheffield, both in terms of their life expectancy and their quality of life.

After attending a Health Foundation seminar at which LSE team members described the project with NHS Isle of Wight, NHS Sheffield was keen to find out whether they would be able to use the same approach. They wanted see if it could help with priority setting where the task was to re-allocate resources within existing activities, rather than deciding how best to distribute additional funds. Much priority setting focuses disproportionately on new developments, shying away from hard choices that may involve disinvestment.

The LSE project team was equally keen to test its methodology in a situation where purchasing and provision were not integrated, and where there were multiple providers and a bigger, less easily defined population.

Whereas the Isle of Wight project analysed options across different disease areas, the Sheffield work involved analysing care pathways within disease areas.

Introducing Star in Sheffield

Programme budgeting data had highlighted three key commissioning areas where Sheffield's spending appeared excessive: cancer, dentistry and mental health. The LSE team applied the Star approach to all three, and details of the entire project are available on the LSE's website.[7]

This report, however, focuses on one well-defined area within mental health services. It provides details of what happened and includes perspectives from a number of the people involved in the project.
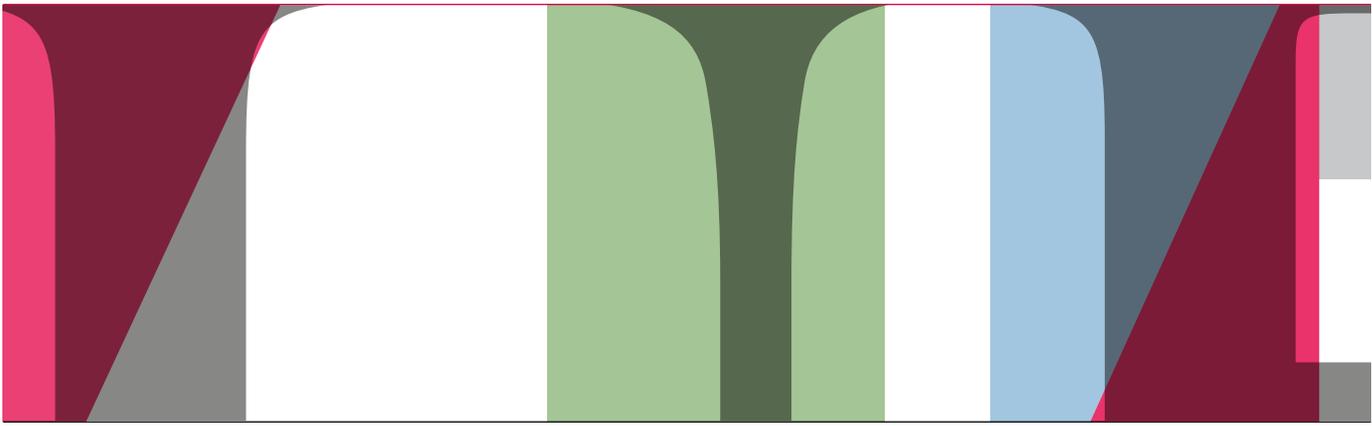
'Our initial thought was to look at the whole of mental health,' says public health director Dr Jeremy Wight. 'But we rapidly came to the conclusion that that was enormously difficult.'

Tackling the entire field would have required too much detailed information about too many interventions to be practical for a pilot. Tony Nuttall, NHS Sheffield's mental health strategy and specifications manager at the time, recommended instead carrying out a detailed analysis of a relatively small-scale programme within mental health. 'Eating disorders were a better-defined area where there was plenty of information and a good understanding of interventions,' he says.

Mr Nuttall and others at NHS Sheffield felt that their eating disorder services could be provided in a better way. For example, some users had to travel to Leeds or Nottingham for inpatient care. Mr Nuttall and colleagues suspected that certain areas of spending on eating disorders were not good value for money, but had been unable to produce an analysis that supported this. 'We wanted to prove it to ourselves and our stakeholders.'

The ambition was to create a commissioning strategy that would safeguard interventions offering relatively high value for money, while re-examining spending on those that offered relatively low value for money. A key element of the task was to make stakeholders confront an untenable situation and win their support for changes in the way that resources were targeted.

7   www2.lse.ac.uk/management/documents/VFM-in-Hard-Times.pdf

Initially, NHS Sheffield was reluctant to involve all stakeholders in the way the LSE team and the Star methodology required. The process would involve sharing details about services needing improvement and the trust felt that this could potentially put the organisation in a vulnerable position.

However, the case for constructively involving stakeholders has an overwhelming logic. It allows commissioners to understand stakeholders' concerns – which is essential for preparing a good case for any decision. Another benefit is that by describing the participative nature of the decision-making process, the trust would be better able to justify the decisions it made. This is all the more important when making decisions to shift resources, where pressure is much greater than for allocating growth money.

NHS Sheffield quickly recognised that if it wanted to introduce an innovative approach to priority setting in response to the tough financial climate, the process would have to be transparent and involve stakeholders. To bring about sustainable change in its eating disorder services, with the confidence and support of all interested parties, its decisions would have to be soundly based, convincing and justifiable. The Star approach offered a way of achieving exactly that.

The Sheffield decision conference

NHS Sheffield and the LSE team organised a decision conference over two days. The conference involved about 25 stakeholders, including clinicians and managers from all local providers of eating disorder services, as well as GPs and representatives from the voluntary sector and the local authority. Four service users also played a full part throughout. A member of the LSE team acted as facilitator.

The conference examined seven interventions offered by Sheffield's eating disorder services and assessed their relative value. The interventions assessed were:

— University eating disorder primary care clinics (UniEDOC) – guided self-help work, informed by cognitive behaviour therapy (CBT) and delivered by trained nurse specialists in a primary care clinic. The clinics mainly work with people with mild/moderate cases, but also some with severe disorders.

— South Yorkshire Eating Disorders Association (SYEDA) – a voluntary sector group which takes self-referrals and offers monthly support programmes, psycho-education and courses on topics such as body image.

— Sheffield Eating Disorder Service (SEDS) – offers outpatient appointments with a psychiatrist, dietician appointments and therapy such as CBT.

— Admission to a private day service in Sheffield.

— Emergency medical admission to a Sheffield acute hospital.

— Admission to an out-of-area or private sector specialist hospital or residential unit.

— Admission to an acute psychiatric ward.

For each intervention, NHS Sheffield supplied the data it had on costs, the number of people benefiting and the severity of their conditions, and any available evidence of health gain. The first task of the decision conference was to generate the inevitably missing data on health gain. Participants split into four mixed groups to do this, and followed the three-step process outlined in 'How Star works' on page 8.
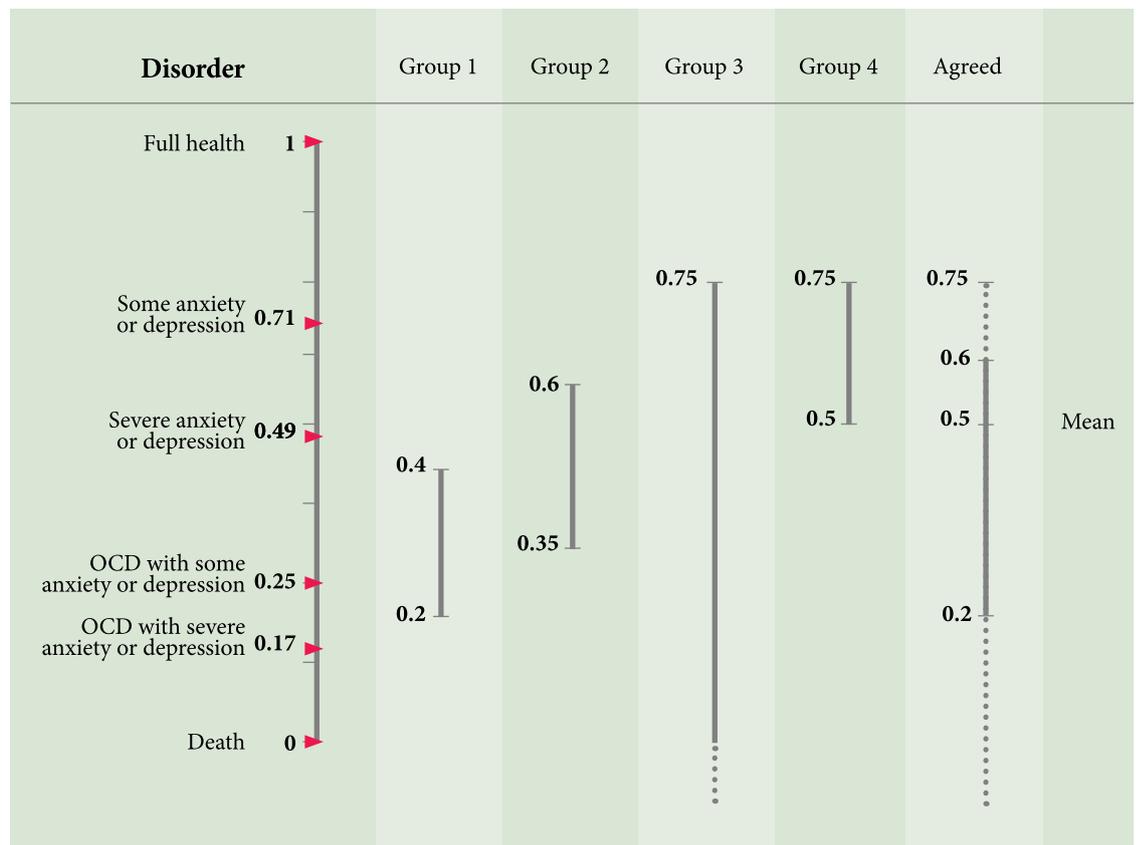
In order to estimate population health gain, data about the average benefit per patient treated had to be generated for each intervention.

The groups used their knowledge and experience to make reasoned judgements on the lived experience of people with three different severities of eating disorder; mild, moderate and severe.

The groups each discussed what it would be like to live with an eating disorder of a given disease severity. They then assigned a weighting for the quality of life of an average person with a given disease severity, with 1 corresponding to full health and 0 representing death.

Figure 4 shows the four groups' estimates for quality of life for a person with a moderately severe eating disorders. It shows the groups agreed a weighting of 0.5 for an 'average' patient, but recognised that patients' quality of life would probably range from 0.2–0.6 and, in very exceptional cases, the quality of life could either be relatively high or so low as to be worse than being dead. The range 0.2–0.6 was used in sensitivity analysis.

Figure 4: Quality of life weightings for a person with a moderately severe eating disorder

Decision conference participants estimated what impact each eating disorder intervention would have on a patient's quality of life.
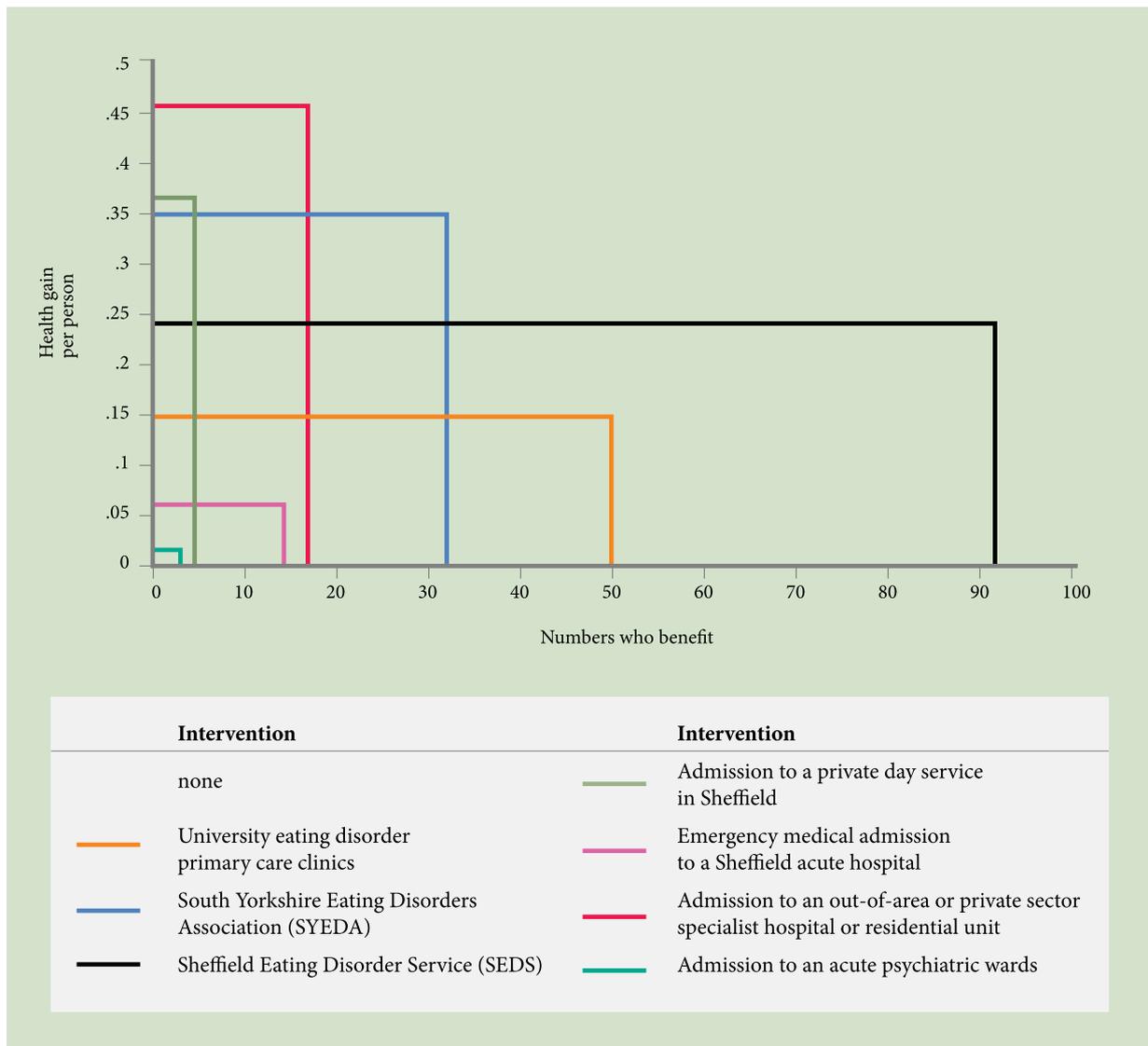
They calculated the proportion of patients whose condition would deteriorate, stay the same or, to varying degrees, recover, and the resulting average quality of life.
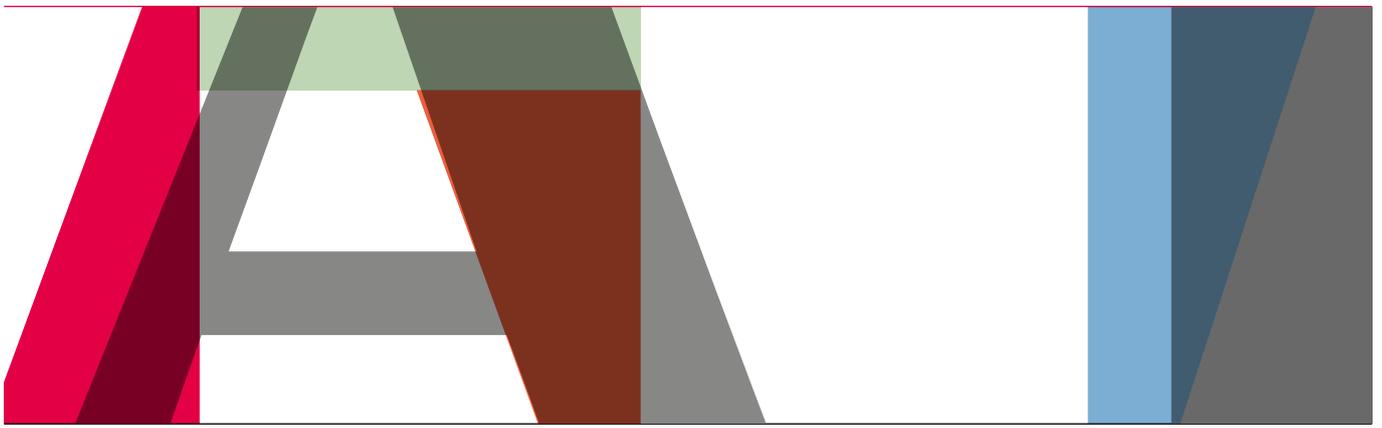
Using the same scale, of quality adjusted life years (QALYs), the participants then judged how patients would fare if they were unable to access the intervention.

The difference between the two scores – with the intervention and without it – represented the intervention's average health benefit per person. Multiplying that figure by the number of patients receiving the intervention produced a score that represented the intervention's contribution to the population's health gain.

Figure 5: Population health gain from different services

Intervention		Intervention	
	none		Admission to a private day service in Sheffield
	University eating disorder primary care clinics		Emergency medical admission to a Sheffield acute hospital
	South Yorkshire Eating Disorders Association (SYEDA)		Admission to an out-of-area or private sector specialist hospital or residential unit
	Sheffield Eating Disorder Service (SEDS)		Admission to an acute psychiatric wards

The results

When each intervention was ranked according to its value for money (VFM), the results were as shown in Table 1.

Table 1: Eating disorder interventions ranked by value for money

Intervention	QALY per £1,000
none	
University eating disorder primary care clinics	0.659
South Yorkshire Eating Disorders Association (SYEDA)	0.374
Sheffield Eating Disorder Service (SEDS)	0.102
Admission to a private day service in Sheffield	0.031
Emergency medical admission to a Sheffield acute hospital	0.013
Admission to an out-of-area or private sector specialist hospital or residential unit	0.008
Admission to an acute psychiatric wards	0.001

This showed that £1 spent in the service with the highest VFM would produce almost 700 times more benefit than the service with the lowest VFM. The community was forced to confront the problem that 90% of spending on eating disorder care generated only a small population health gain.

Mr Nuttall explained that it is common in eating disorder services for a small number of severely ill patients to be frequently and repeatedly re-admitted to specialist high-cost care, raising questions about the relative value of the interventions provided for them. If more resources were devoted to treating people before they reached the acute stage, those resources would yield greater value.

Displaying the VFM triangles for all the interventions on the same graph produced the 'efficiency frontier' for eating disorder services.

LSE research officer Mara Airoldi, who acted as facilitator in the decision conference, explains what happened next: 'From the results, we produced different scenarios where money was spent in different ways to deliver better health for the patient. The crucial one was shifting resources from tertiary care to community services. But it wasn't prescriptive. It was creating a better understanding of value for money that allowed further discussion to take place.'
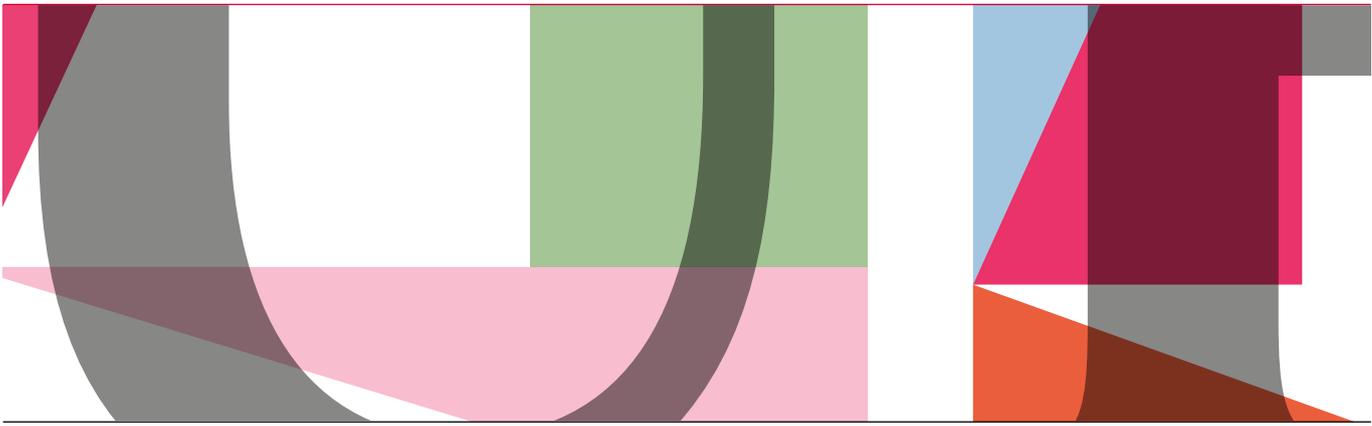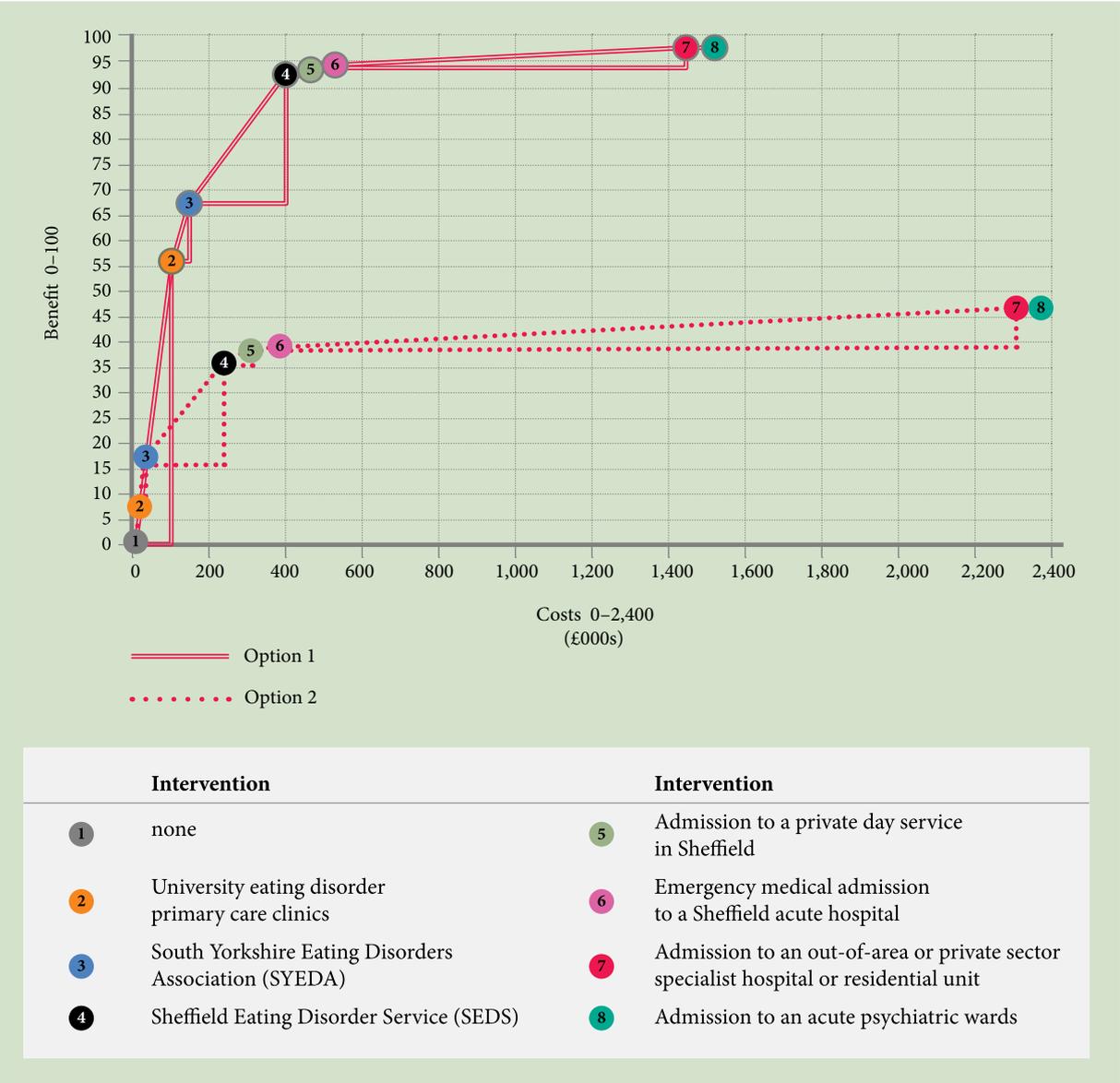
Figure 6: Using visual aids to illustrate different resource allocation options over two years

	Intervention		Intervention
1	none	5	Admission to a private day service in Sheffield
2	University eating disorder primary care clinics	6	Emergency medical admission to a Sheffield acute hospital
3	South Yorkshire Eating Disorders Association (SYEDA)	7	Admission to an out-of-area or private sector specialist hospital or residential unit
4	Sheffield Eating Disorder Service (SEDS)	8	Admission to an acute psychiatric wards

What was the impact?

The stakeholder experience

The decision conference was the first time that the stakeholders in Sheffield's eating disorder services had all been in one room together.

'It was new territory to have everyone sitting down around a table, talking,' says Dr Paul Harvey, a GP and member of NHS Sheffield's professional executive committee, who took part in the decision conference. That in itself proved an aid to mutual understanding and provided a powerful fillip to discussing options for strategic change.

Participants were chosen in order to bring a range of perspectives rather than to represent a particular constituency. 'The process created an atmosphere such that you were there to advise the commissioner, to try to do the best for the health of the local population,' says Ms Airoldi.

Because the Star methodology compares orders of magnitude – not margins – the results it generates are reasonably resistant to attempts at rigging or gaming. It also means that stakeholders focus relentlessly on ensuring they have all the data they need to make decisions – and that they appreciate it is much better to have estimates than no data at all.
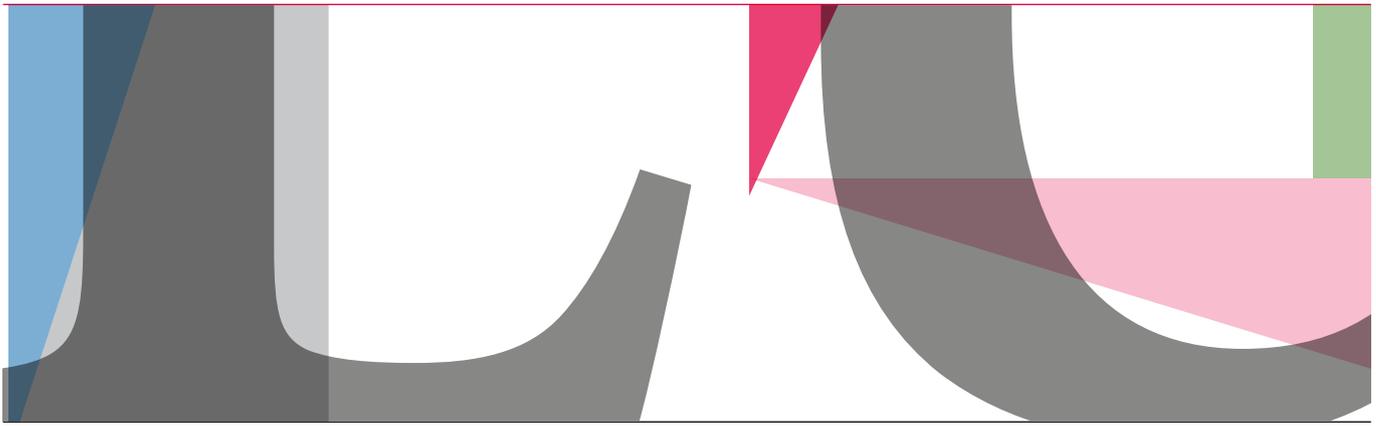
LSE's Professor Gwyn Bevan, who led both the Sheffield and Isle of Wight projects, is adamant that patients, carers and the public must be included. 'It's better to involve them in developing options rather than excluding them from the process and relying instead on public consultation after strategies have been decided by those working in the NHS. If you can say you've included providers and patient groups and they're all agreed, you're in a much stronger position.'

Mr Nuttall says: 'Just to have service users involved – any at all – was an enormous plus. They did provide insights we might not have had otherwise. They were good at feeding in information such as what it's like to spend two or three weeks on an acute medical ward as an eating disorder patient.' He adds: 'It's a brilliant way of getting interested parties to sit down and try to overcome their particular interest in order to develop a rational approach.'

While the methodology may appear daunting at first glance, experience has shown that in practice those without a knowledge of health economics or epidemiology are able to grasp the idea, aided by the visual geometry of rectangles and triangles. 'It's all done with flipcharts and very simple maths – nothing more than a multiplication,' says Ms Airoldi. The facilitator then uses the software to display alternative 'what if?' scenarios. 'It's all built from scratch in front of people, so they come along step by step.'

Dr Harvey agrees: 'They explained it very well. Even if you'd been there without knowing the background, it was all talked through.' He adds: 'There was a good opportunity for people to be heard, and the process wasn't too cumbersome'.

Where the process reveals that a service does not offer good value, its users might be expected to resist the findings. But this does not necessarily happen – in Sheffield, they were just as likely to be supportive. 'This is not the way you'd expect them to react at all,' says Professor Bevan. 'It's enormously powerful having patients in the room.'

Helping to make sound decisions

The Star approach is based on factual information and banishes decision making founded on anecdote or an individual's force of personality. Dr Harvey says: 'I have experience of dysfunctional commissioning in other areas, where someone external seems to make the decisions and no-one can influence them. But this was a good opportunity for people providing services at all levels to be heard'.

Participants can explore together the effects – and side-effects – of different options as the potential impact of changes to current spending patterns are plotted. Although Star does not rely on consensus decision making, which is not always possible, it does bring people together rather than placing them in confrontation with each other. This is one of the project's greatest assets, according to Health Foundation assistant director Helen Crisp: 'It shows it's not impossible to take people with you when there are tough decisions to be made,' she says.

As stakeholders can see the data – in a literal sense – they can understand the reasons for making even hard decisions, and make them promptly. Mr Nuttall acknowledges that collecting information before the decision conference can be time consuming, but once the event is underway, priorities tend to be set quickly. 'Overall it's a good use of time compared to how commissioners normally go about things.'

NHS Sheffield's deputy director of strategy, Tim Furness, agrees. 'It wasn't labour intensive in proportion to what we achieved. At the time, people will have felt it was a significant investment but if you cost it against the savings we made it was a beneficial exercise.'

Because Star uses local data, decisions are not based on national averages, and at every step the process is transparent. 'It generates a conclusion that effectively leaves an audit trail,' says David Collier, formerly of Golder Associates, who carried out an external evaluation of the Sheffield project. 'If you disagree with it, you have to show where it's gone wrong.' He praises the project as 'credible and well received, with genuine insights, strong outcomes and potential for follow-up'.

What was decided

After the decision conference, commissioning managers put together a business case for shifting investment in eating disorder services in order to boost overall health gains and reduce spending. They proposed increasing expenditure on two early interventions: the University eating disorder primary care clinics (UniEDOC) and Sheffield Eating Disorder Service (SEDS). This was predicted to reduce the need for – and high expenditure on – intensive care.

'The findings were easily accepted,' says public health director, Dr Wight. 'The clinicians were comfortable with them. The socio-technical approach had made sure they were on board. Its unique benefit was combining that with the scientific and economic rigour necessary to demonstrate the change in spend was going to be effective.'

NHS Sheffield then held discussions with providers and the strategy was agreed. Implementation began in September 2011. 'It's shown you can change the way services are provided,' says Dr Wight. 'It's reassuring to be able to say we did make a difference there and have changed the way things are happening.'

By early 2012, indications suggested the new strategy would achieve savings of £220,000 from the £400,000 previously spent on inpatient services for eating disorders. However, Mr Furness stresses that the new arrangements have yet to be formally reviewed. 'We haven't yet tested whether the savings have been made through the introduction of the day service or just from there being less demand.'

Similarly, no formal patient feedback has yet been carried out, but Mr Furness has not heard any complaints. 'We think we've made a saving from something that's genuinely good for patients,' he says. 'From the clinicians' point of view, they've been able to expand their own service, and most would think it a good thing that they've now got more control.'

The dialogue between secondary and tertiary care is also much improved. Mr Furness explains, 'They feel there's much better continuity for a patient going from the day service to inpatient care. It's improved relations there and improved the pathway clinically, as well as increasing efficiency.'

Lessons learned

The Health Foundation and LSE are confident that the Star approach is widely applicable, having tested it in environments as dissimilar as Sheffield and the Isle of Wight. It can be used in any type of locality, whatever the population characteristics, but is best applied to services where commissioners have local flexibility, rather than nationally specified core services.

NHS Sheffield chief operating officer Ian Atkinson's advice is to focus on a small, well-defined project to establish the principles of the Star approach before applying it more widely. He suggests choosing a service that is causing the system financial difficulties or one with recurring problems that never seem to be resolved. Clinicians' support is vital, he says, and the financial model must work too. 'If the worst comes to the worst, you want clinicians to be able to stand up and support it. And make sure senior relations between commissioner and provider are absolutely sound.'

Choosing a service in which it is possible to define a typical patient is important too. Ms Airoldi says: 'If you can do that, you can define health benefit and so engage in discussion with the doctors.'

Individual commitment and knowledge of the local NHS are key to success, according to Professor Bevan. 'You need a champion in an organisation who's going to be committed and drive it through with authority. Then, alongside the champion you have to have someone who knows the field and is convinced you can do something together.'

4 Next steps

The Health Foundation is currently developing a toolkit to use Star for analysing local data on health spending and population health needs. This is being piloted with CCGs, and will be made freely available to download. 'We're working to develop it into a widely used tool,' says Ms Crisp. 'The same approach could be applied widely, for example in foundation trusts where they're making decisions internally about aspects of provision.'

The toolkit will enable commissioners, planners and others to use the Star approach themselves and generate graphs that display comparative costs and health outcomes. It will also include a training module for facilitating decision conferences. Email star@health.org.uk for more information about the toolkit.

The LSE now wants to link the Star approach to exploring unwarranted variation in healthcare, using the NHS Atlas. Variations indicate scope for improving benefits without increasing total costs, Professor Bevan believes, and they therefore could be a key source of information for CCGs in responding to the Nicholson challenge.

NHS Sheffield is in discussion with the NHS Commissioning Board's specialist commissioning services, which are to take over responsibility for the inpatient element of eating disorder services. 'Specialist commissioning colleagues are aware of what we've done and the benefits we've achieved,' says Mr Furness.

As responsibility for NHS commissioning passes from PCTs to CCGs, interest in the Star approach is likely to grow. GP commissioners are aware that they need effective methods for public engagement, and that their experience with individual patients will be insufficient to provide the insight they require for difficult decisions.

'It's a methodology that would appeal to CCGs. Everyone is always after a more rational basis for making and defending decisions,' says project evaluator Mr Collier.

'CCGs have an obligation to do something of this sort,' says Dr Harvey. 'They can't just say we've had a chat and decided to stop commissioning something and do it some other way. They have responsibilities to show it's been addressed carefully. So yes, it has lots of possibilities.'

The Health Foundation is an independent charity working to continuously improve the quality of healthcare in the UK.

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We believe that in order to achieve this, health services need to continually improve the way they work. We are here to inspire and create the space for people to make lasting improvements to health services.

Working at every level of the system, we aim to develop the technical skills, leadership, capacity and knowledge, and build the will for change, to secure lasting improvements to healthcare.