



Economic theories relevant to public service provision (Part 2)

EXPLANATIONS OF HEALTH CARE PRACTICE THROUGH ECONOMIC THEORY

Executive summary

Part 1 of “Economic Theories Relevant to Public Service Provision” described the tenets of economics and how they relate to the world in which we live. It summarised fundamental economic theories and illustrated each one with a real-life example. Theory first, then practice. Part 2 reverses that formula. It starts with five challenges facing mental health care and then employs a range of economic theories to explain each problem and offer a solution. Practice then theory.

The principal findings are:

- 1. Emergency waiting times and measurement of success:** Waiting time metrics are a popular but only partial view of service performance in the NHS. In the case of mental health crisis care, the measurement of total time from assessment to successful clinical discharge from hospital provides a more complete picture.
- 2. Postcode lotteries:** Different amounts of money are spent on people who live in different places. This is partly because complex funding formulae are dependent on many factors including local needs, costs of provision and historic expenditure. They also work independently of other formulae for other government funding. How that funding is spent is then determined by hundreds of different commissioners with individual targets and priorities. Postcode lotteries are an inevitability, and they may at least partially explain the starkly different outcomes people with mental health difficulties experience.
- 3. Cost increases in acute care:** A complicated mixture of economic theories can explain the rise in acute care beds for young people. When commissioners prioritise their own individual targets and budgets, cost-shunting, fractured markets and conflicting values undermine collaboration and cooperation.
- 4. Digital:** Mental health care has seen significant growth in online tools and commissioners need to quickly grasp the measures of quality that ensure what they purchase is effective and safe. NHS commissioners need to move from having a digital offer to having the best digital offer. Collaborating to create benchmarking data between areas, more frequent monitoring and a focus on clinical assessment measures are key.
- 5. Data:** Good quality data is critical in driving up standards, identifying need and highlighting effective practice. However, lots of clever, hardworking people just do not understand numbers and so we need some alternative forms of communication. Simple colour coding can help by producing diagrams where large amounts of information can be easily assessed and used to help to improve services without the need for numbers.

Introduction

Economics makes a great first date, but a challenging marriage. At the beginning it is all so simple. Graphs make sense. Theories can be explained by stories about fruit markets. But then it all gets complicated. Graphs become pieces of abstract art, theories lose their illustrations and slowly but surely everyone begins to look pulverised by the latest chapter on econometric analysis.

The explanatory power of economics is strong and worth the challenge because in understanding why something has happened, the solution is better able to emerge. At the centre of it all is the need to hold firm to sets of assumptions and beliefs that underpin theory. Scholars require a level of control in order to demonstrate movement in the specific part of a system that has their attention. This is different to reality and is therefore a limiting factor when trying to explain real life.

Economic evidence is widely used in the commissioning and provision of mental health care. For those responsible for making decisions, and the people whose lives are

touched by those decisions, economics can seem divorced from the realities of their worlds. In isolation, numbers can seem to distort clinical priorities and undervalue people's lives and struggles. Yet by making use of economic evidence building on an understanding of economic theory, it is possible to improve services while making the best possible use of scarce resources.

This report briefing describes five current issues for mental health care and offers economic explanations for why they happen. It also offers solutions and ideas for simple improvements that could make a significant difference. It is not as straightforward as Part 1, but it is grounded in reality and founded on the core principle that economics can help make things better.

The briefing is intended to support health and care commissioners and providers to make use of economics in their work. Its aim is to be relevant to anyone who is interested in mental health care, as citizens, service users, carers and professionals, to gain a different type of insight into how economics influence services.

1. Resource management: Replace waiting times with expected treatment times

Waiting times are a key measure of public satisfaction with the NHS. During the 1980s, treatment waiting times were the totemic signal that the NHS was underfunded. Today, the four-hour maximum waiting time target for A&E is the most well-known operational standard. Pertinent to this chapter is the suggestion that a four-hour target for mental health crisis care should be introduced as a parallel target that reflects the need for parity of mental and physical healthcare. Would a four-hour crisis care target be a useful measure of success?

The economics of waiting times

In the economics of public service provision, waiting times occur where demand is greater than supply. In a normal market – like a high street – when demand is greater than supply, the price of the good increases which attracts more suppliers, reducing demand until equilibrium is reached. But this mechanism does not exist in public services because, rightly, they are free at the point of contact. Patients do not use price as a mechanism to decide whether they should seek treatment. (If they did, it would impact on the amount of healthcare they would consume).

In the absence of pricing as a mechanism to calibrate the market, government either restricts supply through admission criteria, assessments and waiting times, or increases supply through increased expenditure. What it cannot do is alter demand. In practice, government only has half the levers of control compared to a pricing mechanism which controls both supply and demand.

In theory, the rate of change observed in waiting times describes the gulf between supply and demand. If the waiting times are rising, supply is less than demand and that shortfall is growing. Therefore, when the waiting times are constant, rate of supply equals rate of demand. Equilibrium has been reached.

In practice, waiting times are far more complicated than ‘more money in, shorter waiting list out’. Patient Flow is the key – that is, the ease with which a patient is assessed for mental health care, receives it and is then successfully discharged from emergency crisis care.

In micro-economics, this is called the 'customer journey' or 'production cycle'. In essence, it is the recognition that functioning businesses and efficient markets have a flow of people entering and exiting. For example, take a restaurant: It makes money by maximising the food and drink ordered at each table. The best way to do this is to maximise the total number of people using each table each night – the dreaded second sitting. In practice, this means the service will be designed so that each customer has a three-course meal then leaves in the shortest time possible, and the next customer will follow. The leaving is as crucial as the arriving: if Customer 1 doesn't leave, Customer 2 can't arrive. This is literally where the expression ‘turnover’ comes from. No company is ever successful if goods just arrive at their factory. They have to ensure that they leave as well in the form of sales.

Similarly, in a full hospital, if Patient 1 doesn't leave, Patient 2 can't arrive and must wait.¹ In this situation, there are two options – increase supply of acute care beds or discharge existing patients to alternative care provision that will meet their needs.

Much publicity is given to the former option; but can we increase supply exponentially? Probably not. Less attention has been given to discharging patients – which is a clinical decision. Yet this is a very powerful tool, underused as an effective measurement of health care standards.

¹ There are cases where acute inpatient wards operate at above 100% occupancy because of temporary leave policies for patients.

A suggested measurement framework

What does this mean for waiting time targets? Simply that they are not particularly helpful when trying to determine if something is adequately resourced. A more effective approach would be a composite target, based on the entire health care process which

covered the wait to be assessed, treated and successfully discharged to a community-based package of mental health care. Key to this measure is where resources, administration or staffing create bottlenecks, delaying treatment for non-clinical reasons.

What does this look like for crisis care in mental health?

Figure 1 : Measurement framework for mental health crisis care

Point in the system	Measure of success	What it tells us
Baseline assessment	Capacity of crisis care per capita of the population	For a given population, is there the requisite capacity within local crisis services to meet expected need?
Admittance	Waiting time to be assessed	Flow into the service
Treatment	Waiting time for treatment required. Options include: <ul style="list-style-type: none"> • Admission • Community Care • Outpatient appointment • Discharge 	Flow out of Crisis Care. Each treatment option has a different target to be seen and to be treated
Discharge	Number of unplanned/extra bed days Delays in accessing community-based mental health care	Percentage of patients discharged on or before expected date – where this fails, is it possible to identify the bottleneck in the system?
Success	Number of unplanned readmissions	Low readmission rates indicate successful health care interventions
Composite score	Expected Treatment Time	The flow of patients in and out of the crisis health care system is at a rate that is meeting demand, and treating and successfully discharging patients in a timely manner – a healthy system.

The result would give a simple percentage figure of patients using mental health crisis care services who had a successful estimated journey time. Although this would be relatively complex to calculate (there are four different waiting time targets and three different discharge date targets to be factored into the model), the figure would be something that the public would understand and something could be compressed into a succinct headline. For example:

'95% of patients were treated and discharged successfully from hospital within the Expected Treatment Time. This is above the national target of 83%'

The key issue with this target is the potential to be 'gamed': in other words, for priorities to be distorted to appear to achieve better on paper than in reality. In this case, a statistician wanting to optimise their statistics would simply overestimate the expected treatment times by overstating need. However, a similar system already exists for the payment of tariffs for acute (physical) health services to NHS trusts and CCGs. There are tariffs for expected bed days and for extra/unexpected bed days. Therefore, the Expected Treatment Time target would be an expansion of an existing system.

A key advantage is that the metric would take the whole system into account. For example,

we know that extra hospital bed days can be caused by a lack of health or social care in the community which stops patients being discharged. This measure would highlight where those bottlenecks are occurring and encourage people to tackle them, armed with the evidence.

A second advantage of taking a whole-system approach, from assessment to successful discharge, would be to prevent the current 'turn back the clock' measures used in mental health care whereby the metric re-sets each time someone moves from one acute care service to another. Consequently, a patient can have had five successive ten-month placements without anyone auditing that they have been in acute settings for four years.

Conclusion

This metric aims to show that what matters to patients is access to successful treatment in its complete form. People should not have to marvel at the complexities of the system. And we can all see through the shallow waters of waiting time targets. We simply need evidence of whether we can access crisis care quickly and receive the treatment we need in a timely manner. Simply being seen within a given time-frame is only half the story; a target must also tell us what happened next.

2. Why is there a postcode lottery and is it a bad thing?

'Postcode lottery' is a term describing differences in spending, services and ultimately outcomes between areas. Per capita spending – the average expenditure for a person – varies significantly across health, education and social care in different regions of the UK.

In mental health services, there are two economic factors driving per capita variance: funding and spending.

1. Funding

Areas have different per capita budgets set for them because allocation formulas are not simply based on population size.

For NHS budgets, in NHS management jargon, there are four steps in the calculation of actual allocations :

- Determine target allocations based on relative need and relative unavoidable costs;
- Establish baselines (the previous year's allocations plus any adjustments);
- Calculate opening distances from target (baseline minus target);
- Determine pace of change policy (that is, how much closer CCG areas will be moved toward their target allocation each year through differential growth).

(NHS, 2015)

In plain English, this means that CCG allocations are based on:

- Local need and costs of provision (e.g. it costs more per person to fund a small hospital in a rural area);
- Last year's budget (the present is influenced by the past);
- Their budget allocation in comparison to others
- Any other factors, such as the provision of specialist services, other local healthcare budgets and pension costs.

Mental health budgets for CCGs are determined by the snappily titled Person Based Resource Allocation for Mental Health (PRAMH) devised by the University of Manchester. The first stage models the proportion of individuals who use mental health services, and the second stage models the cost weighted need for the service-using population. In short:

- a. How many patients are there?
- b. What needs do they have?

The PRAMH model is based on analysis of what was formerly the Mental Health Minimum Dataset (MHMDS) over the period 2008/09 to 2010/11. The explanatory variables include age, ethnicity, psychiatric diagnosis, severe mental illness prevalence, and the proportion of the population who are single. This is very sensible, but again, the allocation is based on a range of factors; it is not simply a matter of Total Cash divided by Total Population.

What this means for the individual citizen is that the amount allocated to be spent on them personally is down to a complex formula of need, geography, CCG performance and historical budgets, in addition to demographic data, such as age, health and income. The result is differences in per capita spend. And this may not be a bad thing, given that level of need and cost of provision are sensible things to take into consideration.

However, other government budgets are also based on statistical models, all of which are different. Central Government Grants awarded to each Local Authority are also dependent on history, assessments of need and weighted averages; and, when these data are combined with large variances in per capita/per area receipts of Council Tax revenue, this results in very different per capita budgets. In addition, Formula Grant – a Government grant comprising business rates and special grants – have their own unique formula to complete the picture of variety. A complex web of individual calculations which converge on a reality of

differential per capita spend is created. Owing to the complexity of the model, wild differences in per capita spending that cannot be explained by need or cost of provision are likely to result because the system is too complicated to be correct at an individual level.

2. Expenditure

A more succinct point: Even if all health commissioners had the same per capita budget, how much is spent on mental health (unless it is ringfenced money) is determined by hundreds of different commissioners, each with their own targets. Local authorities can choose how much they spend on mental health and how they spend the Public Health budget, so area spending differs. Similarly, even if the Chancellor announces increases in funding for mental health services, CCGs are not obliged to spend their allocation in that way. This means that HM Treasury can announce £500m for mental health support but has no way of ensuring that £500m of extra support is purchased. So, again, it is no surprise that there are massive variations in area spending which do not correspond to, and are not caused by, national funding allocations.

Conclusion

The combination of different funding models and un-ringfenced expenditure means that how taxes translate into spending per person is opaque. Given the above, it is difficult to see how there could be a composite of grant allocations that precisely combine to provide the services that are needed – particularly where someone has multiple needs and will access a range of commissioning budgets. And even if the system could get the allocations correct, local commissioners are still able to spend funding on something else entirely, which further amplifies differences in the services provided.

Public Health England (2018) recently highlighted the ultimate inequality faced by people with severe mental illness: a life expectancy which is 20 years shorter than the average population. They also emphasised the importance of using Joint Strategic Needs Assessments to identify and respond to local needs to help address those inequalities. However, differences in mental health care spending between areas is not listed as a cause or determinant of mental illness and the starkly different outcomes observed. A reason for this may be a lack of evidentiary support. Given the complexity of the system outlined in this briefing, further research is needed to understand if there is a link between spending per capita and the resulting mental health of the population. If one assumes that there is a link between expenditure, services and patient outcomes, this issue is the elephant in the room that requires immediate attention.

3. Cost-shunting and fractured markets: the case of Tier 4 CAMHS

Public perception of the NHS is of a monolithic cooperative where doctors, nurses and managers work together for the good health of the nation. In reality, it is lots of organisations of differing sizes and roles operating at national, regional and local levels with separate budgets, targets and providers.

In economics, when several people are trying to buy the same thing as one group or one organisation – in this case, good mental health care – a form of collective or cooperative consumption is effective at driving down price and raising quality. Essentially, if people work as a group with a common aim, they forfeit their individual ambitions to achieve the greater good. You might not get everything you wanted, but overall everyone is better off. The reality, however, is sometimes very different.

Where cooperatives unravel is when consumers revert to acting as individuals seeking to maximise their personal utility (targets). And this can happen in the case of organisations in a large system as much as for individuals: for example, when an NHS commissioning body prioritises its need to meet its own specific targets and outcomes, even if that decision is detrimental to another commissioner who works elsewhere in the NHS. This causes unintended consequences, such as inflated costs, cost-shunting and, ultimately, treatment decisions being influenced by who pays the treatment bill. What this means in practice is described below.

Tier 4 mental health care for children and adolescents

Approximately 4,420 young people were admitted to Tier 4 specialist child and adolescent mental health units in England and Wales in 2014. This number is double that of 10 years earlier (Ourgin, *et al.*, 2018) and has remained stubbornly high with 4,512 young people admitted in 2016/17 (Frith, 2017). To explain what has happened, it is helpful to consider three economic factors and their impact on incentivising similar behaviour.

1. Fractured Markets create cost-shunting

In 2013, NHS England became the commissioner of Tier 4 services, while Tier 3 services remained the budget responsibility of newly formed CCGs. This has created a market where relatively similar health care services are paid for by two different organisations. This, in turn, has financially incentivised local commissioners to change their behaviour: from the perspective of local commissioners, Tier 4 provision had become a zero-cost item, while Tier 3 remains as a local cost. The logical response, from a financial perspective, is for a CCG to substitute their Tier 3 provision with 'free' Tier 4 provision – an economic term known as 'cost-shunting'. Increasing use of Tier 4 services became a financially rational decision.

NHS England recognised this problem and in the Five Year Forward View for Mental Health set out plans for a New Care Model for Tier 4 CAMHS and some adult inpatient services where budgets were delegated to local systems with lead providers taking responsibility. The aim of this programme, which was expanded in the NHS Long Term Plan, was to end the perverse incentive on local systems to shunt costs to NHS England.

2. Flows into acute provision as a substitute good

Cuts to community mental health services impact elsewhere in the system. Calculating the economic impact is traditionally completed using a basic financial projection that models three scenarios in the absence of the service:

- **Scenario 1:** Costs rise. The person is refused help and their condition worsens until they become eligible for care at a higher Tier of support – acute care becomes the substitute service. Costs to the NHS will rise for these patients.
- **Scenario 2:** Cost-shunting to elsewhere in the system. The person finds alternative care that the NHS does not pay for, such as help from charities or other public services. Costs to the NHS fall but costs to other agencies rise.

- **Scenario 3:** Costs fall to zero: The person is refused a community service but resolves their own issue without using other resources. This is a rarity.

The ratio of the three scenarios determines the financial impact of cuts made. Overall, costs rise when:

$$\text{Cost of Scenario 1} \times \text{Number of patients} > (\text{Savings in Scenario 2} + \text{Scenario 3}) \times \text{Number of patients}$$

The financial gamble taken is whether the savings made will outweigh the additional costs to the NHS. In this case, the commissioner is gambling that cutting the community mental health team saves more than the cost increases for acute services in the NHS treating deteriorating health caused by unmet needs. The relevance here is that whatever happens, reducing funding and therefore access to care earlier in the health care system is financially rational for the local commissioner because even if demand surfaces further up the line in a more expensive way, someone else (another budget holder) is going to pay. Again, the complexity of the funding system can foster competitive rather than collegiate working.

3. Flows of patients out of acute provision

Flows of patients out of services (discharge rates) are key to freeing up supply for new patients: when someone is successfully discharged from a service, a place becomes available for someone else. However, under the national commissioning model for Tier 4 services, patients can be in acute beds long distances from home. This makes discharge challenging. The logistics of getting a multi-disciplinary care team to organise the community package of care for someone 300 miles away is both expensive and difficult; equally challenging is organising a community

care package remotely, without direct access to the patient. The result is that placement lengths go up and the flow of patients through acute provision is blocked. This is an especially toxic situation when the placement has been obtained through a spot-purchasing contract, because the high per-day costs are multiplied by long placement lengths.

Again, an approach that is competitive rather than collegiate compounds these problems. With the exception of local systems using Provider Collaboratives (formally New Models of Care), commissioners of community services do not pay for the inpatient bed during the placement; they only bear the costs of care when the patient comes back into community services. Therefore, there is no financial incentive for the community commissioner to act to shorten the placement; if they do, their own costs increase, while those of another commissioner are reduced.

Conclusion

The NHS is not a cooperative. Internal competition between commissioners incentivised by individual targets and performance measures can explain some of the detrimental outcomes observed. Specifically:

- Fractured markets incentivise cost-shunting – in this case toward more expensive care.
- Contract design heavily incentivises behaviour, service provision and ultimately increased cost.
- If flows of patients in and out of the system become blocked by non-clinical factors, then costs rise unnecessarily.
- The financial savings of one commissioner can be dependent on the spending of another which reduces the incentive to make system-wide savings.

4. Economic factors in digital provision of mental health care

Digital interventions are rapidly expanding mental healthcare provision. Online searches for mental health apps, for example, increased by 566% between 2014-18 (Lury, *et al.*, 2018). There are pros and cons to this. Economically, five theories help explain the potential impact of digital provision on healthcare and public services.

1. Demand results in supply

Successful digital platforms create a dynamic market-place where demand for content can be tracked, collected, analysed and responded to in real time rapidity. In theory, a platform should be able to measure which topic areas or support services are in demand and respond with increased content, help and resources. This is in sharp contrast to community models where services are commissioned five years in advance in response to needs assessments from 2005. Online, providers receive up-to-date information on patient preferences and have the ability to redesign their online offer quickly. This is a breakthrough moment in being able to understand what people want from their health care by enabling choices to be recorded instantaneously and turned into information to drive supply. Understanding preferences at an individual and a community level is an area where traditional commissioners struggle. The data collected online is an enormous advantage in understanding the complexities of patient needs.

2. Economies of scale

With technology, the fixed costs of entry are often high – the variable costs are comparatively low. For example, the development of the platform and its functionality is often the majority of investment costs. However, once it has been developed, the platform can be expanded and replicated exponentially, which means that the cost per patient falls as usage increases. Therefore, apps and platforms should be a relatively low

cost way to reach large numbers of people – particularly apps where variable (running) costs are low. Again, this is in sharp contrast to traditional community teams where the majority of costs are variable – staff and offices. Here, average costs per patient are almost constant and expanding existing services is expensive.

3. Flexible labour supply expands coverage

Online support makes the geographic origin of the counsellor or therapist irrelevant. Using digital technology, someone in Australia can offer online support to a resident of Bradford or Stockholm or Sydney at the same cost – they just beam in. There are two large benefits to this. First, out-of-hours support becomes financially viable because there is no need to pay overtime when someone in Australia is delivering counselling at 11pm (GMT) in London, because in Melbourne it's 9am. Second, if there is a surplus of counsellors in Canada, then rather than embark on a mass emigration programme, just use a video call. The same benefits can be realised for people who live in remote communities.

4. Gaming the system

Resources can be shifted in response to demand – but who decides? With many online platforms, resources can be re-deployed to meet need where it is required (see point 3) because location of staff is irrelevant. The downside is that once targets have been achieved in one place, firms can instantly move resources elsewhere to another area, where performance is lower. An area that achieved volume targets by month 9 could then leave its users unable to access support for 3 months because the focus is now elsewhere. This is known as Moral Hazard, where there are financial incentives encouraging bad behaviour. What it means here is that old-school targets – X people per annum – are no longer sophisticated enough to determine good performance.

5. Measuring for good

Traditional mental health services follow a tried and tested route of assessment, re-assessment and discharge assessment that enables a clear trajectory of success or failure to be charted. The upside of their fixed delivery approach is the ability to show progress. Many of the distinguishing characteristics of online services – no stigmatising assessments, the prioritisation of anonymity, flexible and intermittent access – are extremely appealing to the user, but not to the economist trying to measure what happened. Two things are needed to respond to this:

Better metrics: These need to match the sophistication and flexibility of online platforms. The table below offers some examples. Key to this approach is establishing what ‘good’ looks like in this new world. Commissioners are encouraged to collaborate by pooling data with other areas using the same platforms. This will enable the construction of a baseline of evidence from which relative measures of success can be objectively created. If Bradford and Plymouth are both using the same platform, they should be comparing results to determine how to optimise the outcomes from their digital investment. The more areas that do the same, the better the library of information.

A mix of clinical assessment and online support:

Currently, it is difficult for online providers to consistently replicate the accuracy and efficacy of a clinically administered assessment in person. In the absence of a ready substitute, we recommend that commissioners consider a mixed-model approach where service users are assessed in person prior, during and after long-term online interventions to determine progress. The assessments can have lower thresholds than community services, but are needed to offer a firm baseline against which progress is measured.

Conclusion

These are exciting times of both risk and opportunity. Whilst we will never return to a world without technology, from an economic perspective there are both benefits (responsiveness, flexible support and cost cutting) and challenges. Most importantly, commissioners should rapidly wise-up to the widescale potential for ‘gaming’ existing evaluation systems, resource shunting and a lack of comparative information between areas on what has been achieved. In short, commissioners have to progress from having a digital offer to having the best digital offer.

Figure 2: Useful metrics for evaluating digital platforms

Metric	Relevant information gathered
Participation	<ul style="list-style-type: none"> Matches local prevalence rates for mental ill health Provider can confirm each user ID is a separate person Month to month figures, rather than annual totals. Rolling averages should be avoided as these can make it difficult to see differences in use between consecutive months.
Patterns of use	<ul style="list-style-type: none"> Meaningful use means more than six uses of >30minutes Use is interactive and with a clinician (less weight is given to reading articles or chat rooms).
Access to ‘instant’ support	<ul style="list-style-type: none"> Waiting times for support once logged on and request made Percentage of people who are successful in accessing support.
Need	<ul style="list-style-type: none"> Assessment in person, treatment online, evaluation in person. Linking the practitioner assessments to use of the platform by the patient – before, during, after.
Systemic change	<ul style="list-style-type: none"> What happens to demand and waiting lists for other services such as A&E, Community Mental Health Teams and CAMHS? Do they fall?

5. Presentation matters

A crucial requirement of understanding data is numeracy, but it is in short supply. In 2010 a study by the University of Plymouth found that 45% of nurses failed a validated numeracy test and 89% failed a standard drug calculation test (McMullan *et al.*, 2010). Meanwhile in 2017, research by the Universities of Keele and Manchester concluded that the two thirds of recently qualified doctors they sampled “had trouble with simple data interpretation tasks designed for patients” (Taylor and Byrne-Davis, 2017).

A solution is to present data in an attractive and clear way with less reliance on numbers. When data is conveyed in a way that people can quickly understand, it can help to drive service improvement. Within the NHS, there are two reasons why this is important:

1. Gathering data – people are much more likely to do it and do it well if they then see the outcome of that work

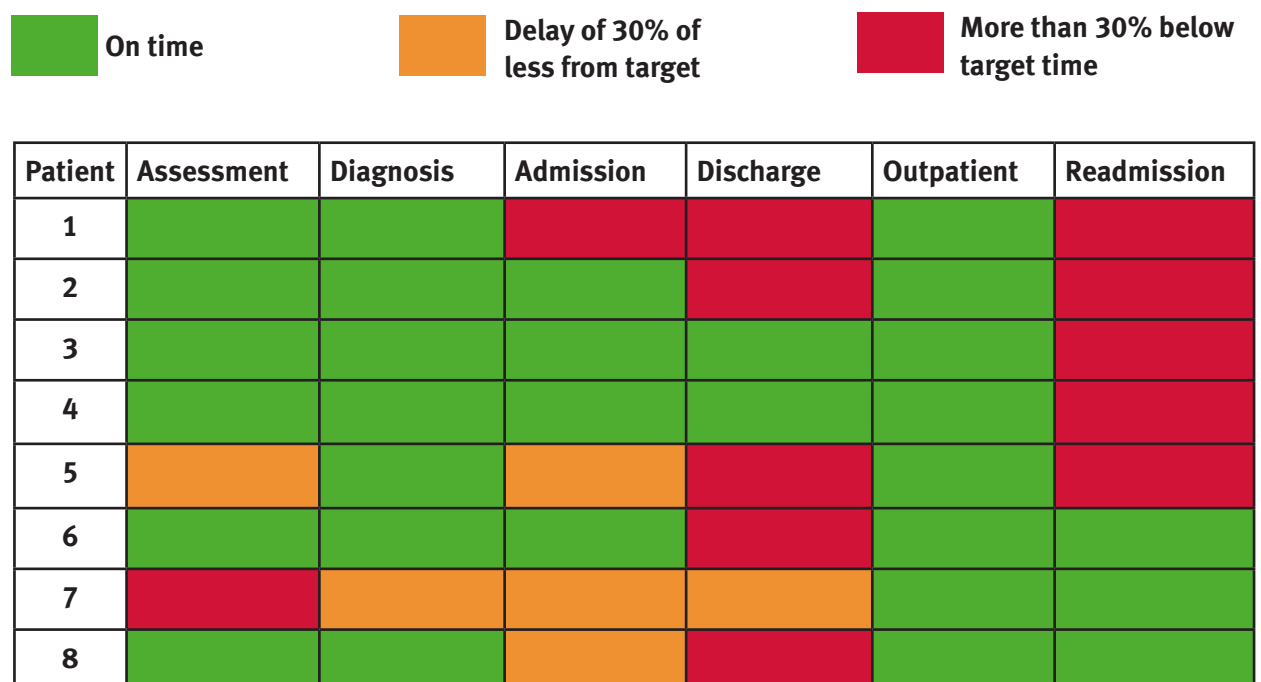
2. Using data – people are much more likely to use data to improve services if they know it is accurate, they understand what it tells them and they can see how to use it

Figure 3 below provides an illustrative example of how complex numerical data, in this case concerning the journeys of eight people through an A&E service, can be shared without the use of raw numbers in order to help improve the service.

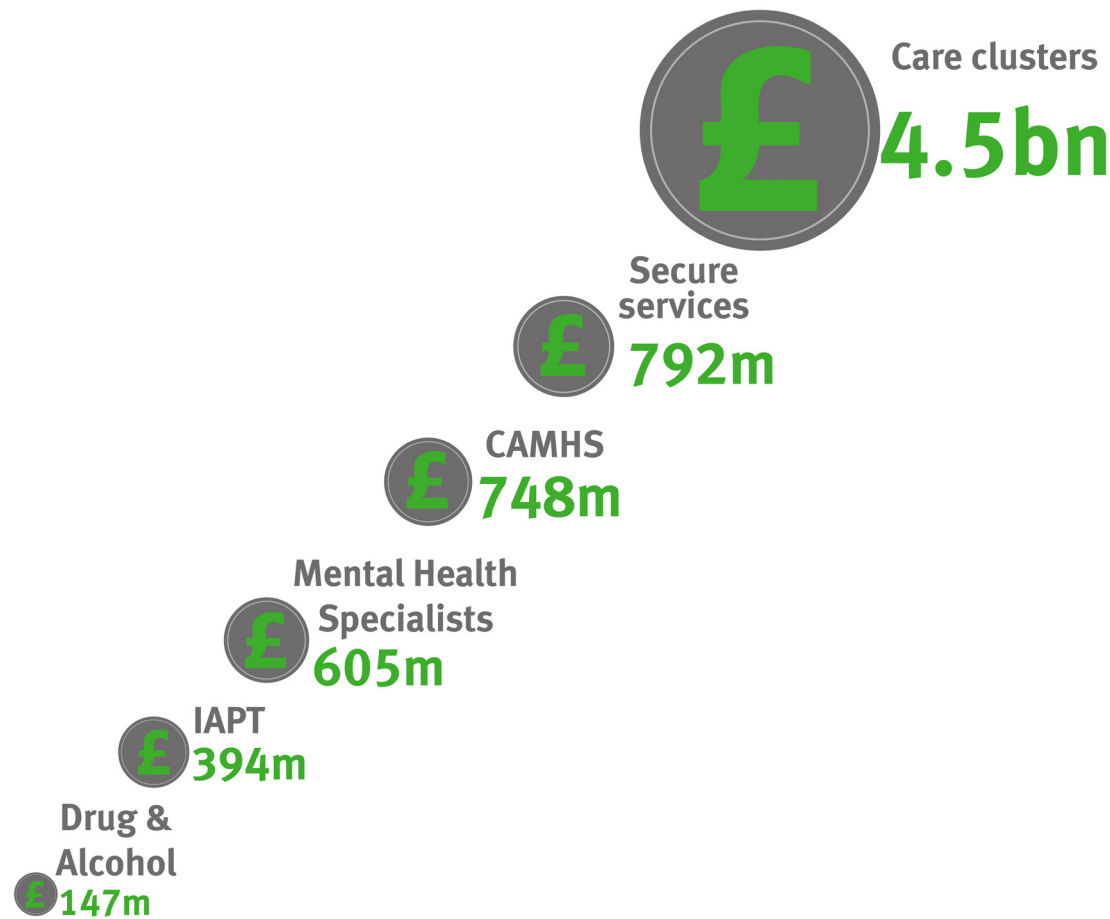
This diagram is not going to set the world on fire, but it does make it clear that for the eight patients listed, there are big issues around discharge and readmission. Diagrams like this are useful because, even when they contain data from a large number of patients, they make it possible at a glance to identify patterns and to clearly see where flow through the system is (or is not) working.

A larger system would simply take the latest box in the row for each patient and calculate total number of people in each colour. In this case, 5 are red, 3 are green.

Figure 3: A flow diagram for patients from A&E to discharge

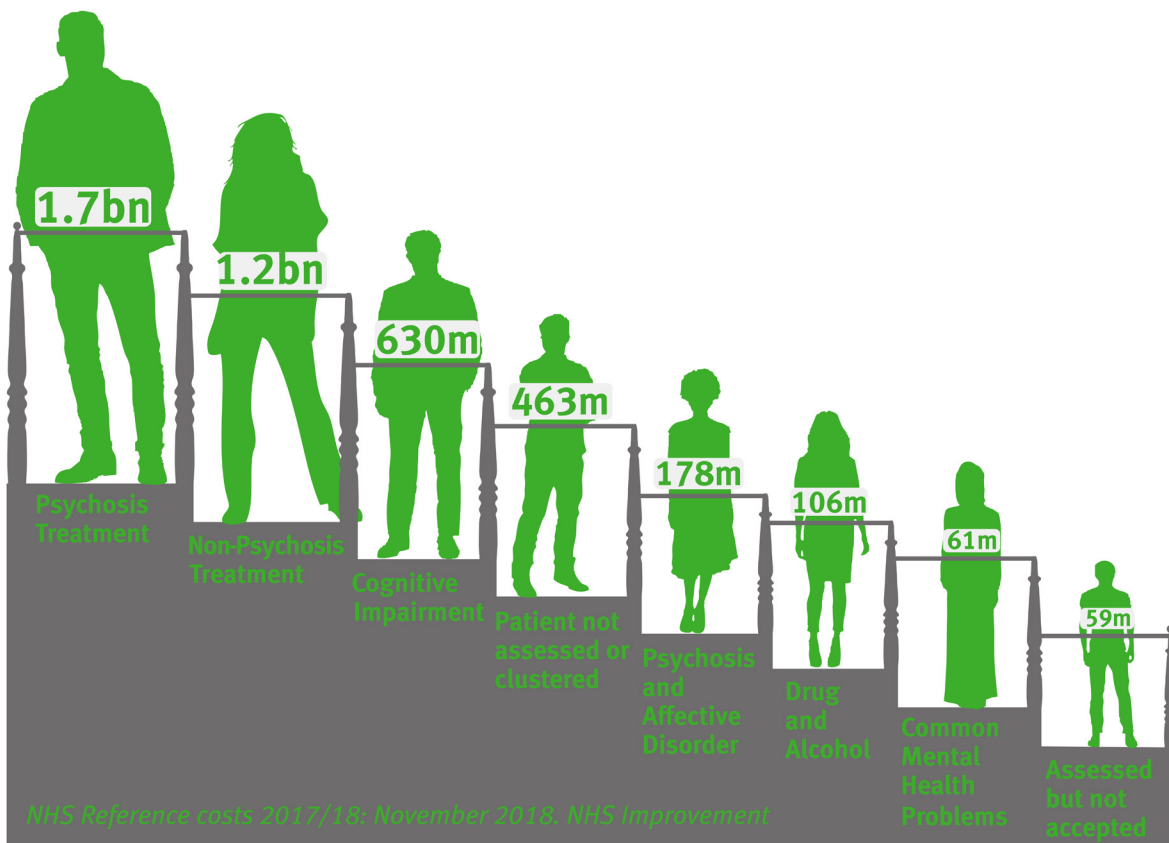


NHS Mental Healthcare Spending 2017/18: 88 NHS Trusts, 152 Foundation Trusts



NHS Reference costs 2017/18: November 2018. NHS Improvement

NHS Care Cluster Expenditure by Treatment



NHS Reference costs 2017/18: November 2018. NHS Improvement

Conclusion

This briefing offers explanations based on economic theory to help understand five challenges faced every day in the commissioning and provision of mental health care. It also offers some solutions designed to respond to those hurdles – particularly with technology and the need to improve measures of quality.

The overall conclusions are:

- Flow of patients through the health care system is a good measure of an effective service because its capacity is dependent on both people entering and leaving treatment successfully
- Funding formulae and expenditure decisions lack consistency. The result is the postcode lottery of per capita spending, which in itself can affect outcomes from services and potentially levels of need
- Acute care provision for child and adolescent mental health provides a clear example of where internal and competing markets in the NHS led to increased costs
- Digital platforms present both risk and reward to patients and commissioners. More sophisticated metrics and pooling of data between local areas are required to ensure we get the best value for money from online mental health support
- Numbers are a challenge for many people. Communicating data using non-numeric methods increases understanding and, subsequently, the power of information

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Economic theories relevant to public service provision (Part 2)

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Executive summary

Part 1 of "Economic Theories Relevant to Public Service Provision" described the tenets of economics and how they relate to the world in which we live. It summarised fundamental economic theories and illustrated each one with a real-life example. Theory first, then practice. Part 2 reverses that formula. It starts with five challenges facing mental health care and then employs a range of economic theories to explain each problem and offer a solution. Practice then theory.

The principal findings are:

- 1. Emergency waiting times and measurement of success:** Waiting time metrics are a popular but only partial view of service performance in the NHS. In the case of mental health crisis care, the measurement of total time from assessment to successful clinical discharge from hospital provides a more complete picture.
- 2. Postcode lotteries:** Different amounts of money are spent on people who live in different places. This is partly because complex funding formulae are dependent on many factors including local needs, costs of provision and historic expenditure. They also work independently of other formulae for other government funding. How that funding is spent is then determined by hundreds of different commissioners with individual targets and priorities. Postcode lotteries are an inevitability,

and they may at least partially explain the starkly different outcomes people with mental health difficulties experience.

- 3. Cost increases in acute care:** A complicated mixture of economic theories can explain the rise in acute care beds for young people. When commissioners prioritise their own individual targets and budgets, cost-shunting, fractured markets and conflicting values undermine collaboration and cooperation.
- 4. Digital:** Mental health care has seen significant growth in online tools and commissioners need to quickly grasp the measures of quality that ensure what they purchase is effective and safe. NHS commissioners need to move from having a digital offer to having the best digital offer. Collaborating to create benchmarking data between areas, more frequent monitoring and a focus on clinical assessment measures are key.
- 5. Data:** Good quality data is critical in driving up standards, identifying need and highlighting effective practice. However, lots of clever, hardworking people just do not understand numbers and so we need some alternative forms of communication. Simple colour coding can help by producing diagrams where large amounts of information can be easily assessed and used to help to improve services without the need for numbers.

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