

How to optimise capacity and demand for mental health services

Since 2014, Mental Health Strategies have been developing simulation models of mental health services across the country – helping local services to think through questions of capacity and demand. Within our Sim:pathy tool, specially developed to bring discrete event modelling approaches to mental health, we create a structure of teams and services which matches current local reality. Alongside our data analysis, we carry out detailed engagement with managers and clinicians– identifying options, modelling scenarios for change, considering ideas in combination, testing acceptability, beginning to think about implementation approaches.

So what lessons have we learned that can help you? Whilst places differ, there are patterns which we have often seen, and which seem worth sharing more widely around mental health services.

1 Routine use of acute overspill need not be regarded as inevitable

There is no need or justification for a fatalistic acceptance of routine use of out-of-area acute overspill. Many actions are being taken to reduce the risk of out-of-area overspill – and there are places where this is now a very rare event. This includes places which previously had serious and persistent use of acute overspill. There are good evidence bases supporting many new and emerging service models. Better alternatives to admission, and better management of the inpatient process really can reduce the risk of sending people out of area.

2 Demographic change may be important

....both total population change, and how that breaks down across age groups. We have often found services not properly aware of the way the size and make-up of their local population may be changing – and how that could affect future demand for services. This varies a great deal from place to place, so detailed local analysis is essential.

3 Community caseloads need the same discipline in resource management as beds do

Services mostly know and understand key metrics in the management of inpatient flow: admission rates, lengths of stay, occupancy rates, delayed transfers of care, readmissions. The equivalent metrics for community caseloads are typically less well understood: accepted referral rate, contact intensity, episode length, caseload occupancy. As we all know, measuring these things is the first step in managing them.

4 There is very substantial variance in services' flow practices –not solely driven by need

Almost everywhere, we have found significant differences within Trusts as to the metrics referred to in (3) above. This does not typically simply correlate with differences in need, but reflects historic differences in teams' and services' working practices. Managing the quality of services necessarily means understanding, and then managing, such variances in the management of flow through services – and how this may be affecting both productivity and outcomes.

5 Both the 'front door' and the 'back door' need to be managed

In both inpatient and community services, there is typically a lot of attention on the criteria and processes for accessing services. There tends to be less attention on the criteria and processes for leaving services – resulting in extended stays in inpatient beds, and long periods as community patients. A lot of service capacity can be taken up by people for whom services are no longer providing significant care or treatment.

6 Specialisation can increase the difficulty of managing peaks and troughs in demand

There are, of course, strong arguments for clinical specialisation, of ensuring that staff with the right specialist skills are available to meet individuals' very particular needs. But every decision to create a new specialist service is also a decision to "carve out" resources, and make them less available for other needs. There is a trade-off between specialisation and flexible access to services; sometimes, larger, and somewhat more generic teams and services may offer a better option.

7 Neighbourhood working is another form of specialisation.

Many areas are contemplating providing some services at the “neighbourhood” level – typically serving populations of around 50,000 people, and linked to primary care networks. If these changes simply mean splitting larger teams into smaller ones, with individual practitioners trying to offer a similar service to a smaller patch, there is a risk of this creating substantial inefficiencies. Successful neighbourhood arrangements need to include an element of greater generic working, with practitioners taking on a wider range of roles and responsibilities.

8 Scale matters

It's an established financial principle that, if you want big savings, you have to examine big budgets. The same principle applies in work to improve patient flow. Big flow improvements require big changes in practice and/or investment; a 4-bedded crisis house, however well-functioning, will not by itself make that much difference to an overall service.

9 Mergers of community teams need to take account of the volume and nature of flows to services

Better flow will not always be achieved simply by bigger teams and more generic working. It is also important to examine in detail the patterns of flow in teams which are proposed to merge. If these are very different, it may create difficulties in trying to manage competing pressures on their caseload. For example, if a single team is trying to provide both a long-term assertive outreach function, and a short-term urgent assessment function, there is a risk that one will drive out the other – a similar problem to acute hospital wards trying to manage both elective and non-elective admissions.

10 Concentrating resources at known pinch-points can really work

Pathways through services often pass through pinch-points – teams or individuals with a smaller fixed capacity than they often require to meet demand. For a non-urgent service, this can lead to waiting lists of varying lengths. But for some services, such as single points of access, crisis assessment services, or assessment wards, insufficient capacity at the time of referral can mean that the patient simply diverts to a different service – often one which is more expensive, and less able to meet their needs. For such services, it may be worth ensuring a high “buffer” between capacity and expected demand, to ensure availability of services to manage peaks in demand.

11 Admitting within-Trust, but outside local catchment does not increase lengths of stay.

Many Trusts have multiple inpatient sites, and designate local catchments served by each. If patients are admitted outside their catchment, but within the same provider Trust, there is a clear tendency for their inpatient stay to be shorter – even if they subsequently re-transfer to their “home” area.

12 It does not make sense to set the same target mean occupancy rate for all services.

Most services are aware of a recommended target for acute mental health wards of a mean occupancy rate of 85%. Very few meet this target. In reality, the expected occupancy rate will differ, depending on the size of the bed pool, the pattern of lengths of stay, the number and pattern of admissions, and the acceptable level of fails (a bed of the right type not being available.) The target mean occupancy rate for each local service can therefore be calculated, and may or may not match the recommended 85%

13 Waiting time standards are likely to be very difficult to meet, for many services in many places

We have modelled a wide range of waiting time standards, including national policy expectations, local contractual standards, and simply local aspirations. Default targets have been set at 2 weeks, 4 weeks, 6 weeks, 18 weeks, and points in between, with variances for urgency. Our models have typically projected significant difficulties in many services meeting their waiting time targets, with unrealistic matches between caseloads, referral numbers, and pathways through services.

14 Everywhere is not the same – there are substantial differences in the balance between capacity and demand across the country

Notwithstanding the patterns described here, the lessons for any individual location are not the same. The scale and nature of local problems and opportunities vary significantly – as does the local context. The capacity needed of specialist mental health services is very much affected by the availability and role taken by local social care, primary care, and third sector services – and these vary greatly from place to place. The optimum model for each locality will always need careful local consideration.

All of this emphasises the need for an intelligent plan to match the capacity you offer with the demand you face.

Next steps


Mental Health Strategies offer an approach which addresses your problems, and enables your questions to be answered intelligently, robustly and convincingly. We work with your managers, clinicians, data providers, and stakeholders to develop an optimised and affordable model for your services, with service-by-service detail as to:

- Patterns of referral, by source and type
- Patterns of assessment/treatment contacts
- Waiting times, both to and within services
- Volumes of activity
- Caseload sizes
- Discharge destinations
- Episode lengths
- Co-working arrangements with other services
- Probabilities of routes through services
- Optimisation of flow patterns within current resources
- All of the above analysed by age, sex, and locality


Our clients now have a clear, robust evidence base for how they best organise and resource local services. Talk to us to find out how you can get the same for your services.

We have successfully applied Sim:pathy modelling in the following mental health communities:


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|---------------------------------|------------------|-------------------------|-----------------------|
| 1. Bath and North East Somerset | 5. Croydon | 10. Leeds | 14. Nottinghamshire |
| 2. Birmingham and Solihull | 6. Cumbria | 11. Leicestershire | 15. Pennine Care |
| 3. Bradford | 7. Derbyshire | 12. Mersey Care | 16. South West London |
| 4. Castle Point and Southend | 8. Dorset | 13. Norfolk and Suffolk | 17. Surrey |
| | 9. Hertfordshire | | |



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Mental Health Strategies provides a range of bespoke consultancy services to mental health providers, CCGs and the increasing number of organisations concerned with policy development and service transformation in the NHS. Clients choose to work with us because our team are experts in their fields and are dedicated to improving mental health services in the UK. Clients decide to keep working with us because we are responsive to their needs, agile in our approach, and deliver outstanding pieces of work, time after time.

We have a proven track record of success, with over two decades of experience. In this time we've worked with a spectrum of clients including providers, commissioners, as well as independent, and charitable sector organisations. Having worked in almost every part of England, as well as engagement in other countries, we can draw on a huge base of data, knowledge and experience as to how providers organise their services, how they compare to others and how they perform versus best practice.

Through services like simulation modelling, service evaluation, pathway redesign, and organisational development we are able to add significant value and insight, helping you deliver compassionate, high quality, effective and efficient mental health services.