Sheffield Health and Social Care NHS Foundation Trust

Board of Directors - Public

Date:	26 May 2021	Item Ref:	7

TITLE OF PAPER	**Covid-19 surge plan – demand and capacity plan**
TO BE PRESENTED BY	Pat Keeling, Director of Special Projects/ Strategy
ACTION REQUIRED	**The Board of Directors is asked to review the demand and capacity plan developed as part of the Trusts Annual operational Plan.**

OUTCOME	For the Board to be assured that appropriate plans are in place to deliver the Trust's Operational Plan through 2021/22 regarding demand and capacity due to the Covid pandemic.
TIMETABLE FOR DECISION	May 2021 Board Meeting.
LINKS TO OTHER KEY REPORTS / DECISIONS	Draft Annual Operational Plan (item 12b) Finance Report (item 16)
STRATEGIC AIM STRATEGIC OBJECTIVE	We have agreed our strategic priorities for 2021/22. This report relates to the strategic priority Covid: Getting through safely, and the following key deliverables: • Ensure services remain safe for our service users and our staff. • Recover core activity ensuring accessible care and treatment. • Assess demand and create the capacity for Covid 19 surge.
BAF RISK NUMBER & DESCRIPTION	2020/21 BAF.0001 There is a risk that the Trust may not be in a position of readiness to respond to the different phases of Covid-19. 2021/22 BAF QAC Risk 2: **There is a risk** that we will be unable to deliver essential improvements in the quality of care in all services within the agreed timeframe to comply with the fundamental standards of care
LINKS TO NHS CONSTITUTION /OTHER RELEVANT FRAMEWORKS, RISK, OUTCOMES ETC	NHS 2021-22 Priorities and Operational Planning Guidance. Government mandate to NHS England and NHS Improvement COVID-19 mental health and wellbeing recovery action plan
IMPLICATIONS FOR SERVICE DELIVERY & FINANCIAL IMPACT	The capacity plan is supported by the Trusts Financial plan and agreed investments through the MHIS, Service Development Fund and the Spending Review investments
CONSIDERATION OF LEGAL ISSUES	No direct issues highlighted.

Author of Report	Jason Rowlands
Designation	Director of Strategy and Planning
Date of Report	19th May 2021

Proud to care in Sheffield

Summary Report

1. Purpose

For approval	For assurance	For collective decision	To seek input	To report progress	For information	Other (Please state)
	X					

For the Board of Directors to review the demand and capacity plan and consider its effectiveness in ensuring the Trust can manage the covid surge impact through 2021/22.

Attached at

Appendix 1 is the demand and capacity plan developed as part of the Trusts Annual Operational Plan

Appendix 2 provides a summary of the different Covid demand models issued via Mental Health System Improvement Network

2. Context – Impact of Covid on mental health and wellbeing and the national plan

This report focusses on the impact covid is expected to have on the demand for mental health services provided by the Trust over the next 1-2 years and the plans in place to respond to this.

a) Sheffield impact assessment

The Sheffield Health and Wellbeing Board (HWB) received the report on The Impact on Health and Wellbeing in Sheffield of the Covid-19 pandemic and subsequent societal response to it. in September 2020.

The strategic issues from the HWB that we would like to bring to the Boards attention are as follows:

- Impacts related to likely economic downturn including further unemployment, loss of business, homelessness, ingrained poverty, increased self harm and suicide.
- Children and young people (CYP) struggle to manage their emotional regulation across the school day as activities are restricted through social distancing and protective bubbles.
- Children and young people's increased susceptibility to depression, anxiety and sleep disorders due to reduced activity, productivity, social contact, and sense of purpose.

- Children experiencing adverse childhood experiences are likely to experience heightened levels of stress and trauma and a reduction in contact with other protective adults and activities.
- Ongoing distress due to bereavement
- Post Traumatic Stress Disorder (PTSD) particularly affecting health care workers, those in areas of high outbreak, members of the public having lost family members in particularly tragic circumstances.
- On-going depression and anxiety triggered by the initial Covid response.
- Some health-related anxiety may continue (e.g., due delayed treatment or diagnosis of cancer)

Key messages regarding what we might expect to happen next were:

- National forecasting would indicate that the pandemic could increase the number of people experiencing mental health problems by approximately 500,000 in the UK. This would likely mean an increase of between 3.5 - 5 thousand additional people seeking help for mental health problems in Sheffield.
- Demand for mental health services was very likely to have been 'supressed' during the pandemic. As services open up, this will re-emerge alongside demand 'generated' because of the pandemic resulting in increased demand.
- Particular groups of people have and are facing higher risks to their mental health and wellbeing due to the pandemic.

b) National recovery plan

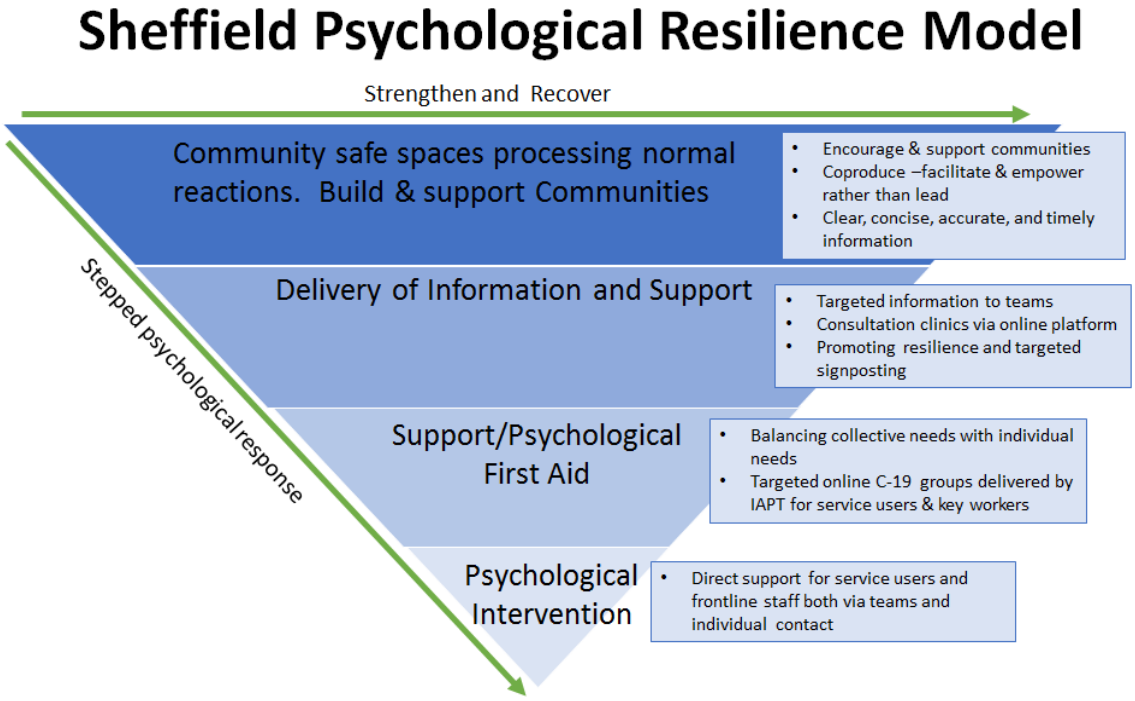
The COVID-19 mental health and wellbeing recovery action plan (HM Government, March 2021) is the national plan to prevent, mitigate and respond to the mental health impacts of the pandemic during 2021 to 2022.

The national plan approach is based on:

- A significant portion of the new need should be targeted through public mental health approaches and most new COVID generated mental health service demand should be for IAPT and lower levels of CYPMH provision.
- A proportion of the demand supressed during COVID will have recovered spontaneously, a proportion is likely to return to the services it was originally supressed from (e.g. IAPT) and a proportion will likely escalate and present elsewhere (e.g. crisis, secondary care services and admissions).
- There is also evidence of disproportionately adverse impacts on the mental health of people with existing mental health conditions, which may lead to increased acuity and service demand on secondary care, from this group.
- There is also evidence of young people, women and ethnic minorities having a greater burden of common mental disorders (ethnic minorities data is not detailed enough to perform robust analysis on the variation between different backgrounds, but there is likely significant variation between different groups).

c) Sheffield system approach

The system plan across the Sheffield Accountable Care Partnership for supporting mental health and wellbeing is summarised below.



Surge planning – demand and capacity models

3. a) Demand modelling and forecasting

The Mental Health System Improvement Network has produced four demand forecast models for modelling population mental health needs. These are available through the Future NHS Collaboration Platform. The four models and their development groups are:

- *Tees Esk and Wear Valleys model* - Developed by: TEWV; County Durham, Tees Valley, North Yorkshire, Vale of York CCGs (clinicians, R&D, planners and public health partners)
- *COVID-19 Mental Health Forecast Model* – Developed by: Centre for Mental Health and NHS – Cheshire and Wirral FT, Newcastle and Gateshead CCG, Lancashire and South Cumbria FT, Public Health, NHS England and NHS Improvement South East.
- *Midland Partnership NHSFT Mental Health Dashboard* – Developed by: Midlands Partnership NHSFT (MPFT); Midlands Public Health, Merit Board West Midlands, Keele University. (clinicians, R&D, planners and with public health specialists form MPFT collaborating with others from the North West and the East of England to form an evidence review)
- *Mental Health Surge Model* – Developed by: Mersey Care NHSFT, the Strategy Unit, Cheshire & Wirral Partnership NHSFT, North West Boroughs NHSFT. The Health Foundation

Appendix 2 provides a summary of the different Covid demand models.

The COVID-19 pandemic is a highly fluid situation and there are significant gaps in the published evidence base on its direct and indirect mental health impacts across the different groups in society. The UK has seen multiple waves of infections, manifesting differently across different areas at different times. The future trajectory of the pandemic is unknown, as is its end point, and the degree of societal change at the end state.

These models have been developed by local systems to try to anticipate possible changes to mental health needs within their local and/or national populations, using published research evidence and local and national data. Following an initial review of the four models we have chosen the model developed by Tees, Esk and Wear Valleys FT.

b) Tees, Esk & Wear Valleys (TEWV) FT Mental Health Surge Prediction Tool

Our planning and performance teams have chosen to use this Covid surge planning model which uses a Microsoft Excel based tool designed to support commissioning and service planning across a geographical footprint. The tool uses national and international evidence in combination with local and national data to perform calculations of estimated additional population prevalence and demand for services. This is configurable at system and provider level for the 0-17; 18-64 and 65+ age groups.

The main strengths of this model and tool:

- Supportive to local service planning and commissioning, anticipating workforce needs at system level etc.
- Ease of use and accessibility to a wide range of people
- Efforts have been undertaken to provide estimates for socially excluded groups of interest to service planners where the evidence base is limited.
- Calculations are configurable by the user to account for the proportion of system demand seen within an individual organisation.
- Transparent descriptions of evidence used, and assumptions and calculation mechanics are provided.

However,

- The application of an increased prevalence estimates to current service access data for adult mental health could mask any changes in the gap between prevalence and access.
- Suppressed demand / backlog calculations are out of scope for the model.

4 Developing our Covid surge plan

a) Our medium- and longer-term approach

Strategically there is a clear alignment of approach to delivering transformation and addressing inequalities across the SYB ICS, the Sheffield Accountable Care Partnership and by the NHS trusts and primary care providers in Sheffield (Primary Care Sheffield and the Primary Care Networks). Key priorities for development across the ICS system and within Sheffield are: transforming community mental health services; improving crisis care support; reducing out of area placements. There is a clear recognition that mental health inequalities are linked with wider cultural and societal systems of

disadvantage which impact a person's wellbeing and that many of these challenges are beyond the remit of the traditional health system alone (this is reflected in the Sheffield system approach summarised at 2c above).

b) Our surge plan – demand and capacity plan

The demand and capacity plan is attached as Appendix 1 to this report and also forms part of our Annual Operational Plan. It has been developed in conjunction with the respective General Manager and Head of Service as follows:

- Using the demand assumptions from the TEWV tool, which indicate on average a 20% increased demand for the adult population with pre-existing mental health needs and an increase in demand of between 15-30% across a range of risk factors (e.g. bereavement).
- Reviewing existing performance data in respect of service demand across 2019/20 and 2020/21, in conjunction with the Head of Planning and Head of Performance.
- Review and alignment of the capacity requirements against increased investment plans developed and agreed with commissioners.
- Review at Business Planning Group

c) Investing in additional capacity

The financial plan (reference Finance Board report item 16) confirms the increased investments allocated to the Trust for 2021/22. These are summarised as follows:

- Mental Health Investment Standard increased investment 2021/22 of £3,705,000
- Service Development Fund increased investments 2021/22 of £958,000
- Spending Review increased investments, to support the Covid response, in 2021/22 of £1,889,000.

The bulk of the above funding has been modelled in the financial plan as additional expected expenditure to support services with capacity requirements.

Our workforce plan (referenced in the Annual Operational plan) summarises the planned workforce growth in line with the demand and capacity plan and finance plan.

5 Risks

The risks to the Covid surge plan are:

a) The planning assumptions have been developed in a fluid and uncertain context, and may not fully reflect future demand because:
   - The future trajectory of the pandemic is unknown, as is its end point and the degree of societal change at the end state.
   - The models try to anticipate possible changes to mental health needs within their local and/or national populations.

b) Recruitment outcomes fail to deliver increased capacity and or create reduced capacity in other services as a result of internal appointments.

c) Failure to successfully commission or procure additional bed-based capacity.

6 Next Steps

a) **Monitoring of Covid surge, demand and capacity through the Service Delivery Group**

b) **Monitoring of the delivery of the workforce plan**

c) **Finalise the required investment cases to commit funding for discharge planning and inpatient capacity**

d) **Further development of our demand and capacity planning**

Developing our approach to demand and capacity planning is a key deliverable within the Annual Operational Plan 2021/22. We will build and strengthen our approaches to understanding and managing demand, capacity planning and productivity. We will make effective use of capacity and demand tools, benchmarking sources and best practice examples available through the Mental Health System Improvement Network and their on-line resources. The learning and benefits from this will support the delivery of safe and effective care, ensure all our services and teams are working effectively, in line with best practice and service specifications, and support a better more cost-effective use of our available resources. The development plan will be overseen by the Annual Integrated Planning Group, reporting to the Business Planning Group.

7 Required Actions

The Board is asked to review and consider:

a) **Does the plan provide the right responses to expected increased Covid demand on services?**

b) **Does the Board require us to undertake sensitivity analysis using the other three models?**

8 Monitoring Arrangements

Progress reports scheduled to Finance and Performance Committee through 2021/22.

9 Contact Details:

Jason Rowlands, Director of Strategy and Planning
Jason.Rowlands@shsc.nhs.uk

Capacity and demand plan: NHS Long Term Plan and covid19 surge

Context for our capacity and demand plan

The capacity and demand plan forms part of the Trust's Annual Operational Plan. It brings together our workforce, finance, and activity plans to deliver the improvements needed to meet the needs of the people of Sheffield. Information relating to our workforce projections will form part of the Trust's submission to the South Yorkshire and Bassetlaw ICS and NHS England returns.

Demand models for the coming years indicate a general increase in demand of approximately 20% in some services (assumptions based on Tees, Esk & Wear Valleys FT Mental Health Surge Prediction Tool). This will be driven by the Covid pandemic recovery phase, its longer-term impact on health, wellbeing, and the broader socio-economic resilience. As we implement our plans, we will be clear how we will manage the expected increased demand with our partners across Sheffield, through improved effectiveness, service improvement and transformation, future investments and expansion.

We are anticipating increased need during 2021/22 in the following services:

- Improving Access to Psychological Therapies (IAPT)
- Liaison services within A&E and general hospitals
- Single point of access service
- Specialist community perinatal service
- Primary and community mental health services
- Crisis services and access to home treatment across the 24/7 period
- People detained under Section 136 and need for access to a Place of Safety
- Acute inpatient care

As we deliver the increased activity plan, we will continue to review all our services to understand changes in demand ensure the necessary capacity plans are developed, agreed, and implemented.

Capacity and demand plan

The table below summarises the planning assumptions regarding increased activity during 2021/22 and planned expansion and investments to increase capacity to respond to this increased need.

The planned responses to expected increased demand range from increased investment and workforce expansion, commissioning additional capacity, improving and re-designing current pathways. The capacity plan will see workforce growth and expansion in some service lines. This is summarised in more detail in the workforce plan at appendix 3.

The additional workforce costs are funded through the financial plan and the additional agreed investments through 2021/22:

- Mental Health Investment Standard increased investment 2021/22 of £3,401,000
- Service Development Fund increased investments 2021/22 of £958,000
- Spending Review increased investments in 2021/22 of £1,889,000

Service	2019-20 Activity (1)	Demand assumptions (2)	2021-22 activity plan (1)	2021-22 capacity plan
Improving Access to Psychological Therapies (IAPT)	13,591 entered treatment	Supressed demand: 11,295 entered treatment in 20/21 (-16.4% on 19/20) Demand in Q3-Q4 20/21 back to pre-covid levels. LTP Projection for 2021/22 is 18,238 20% increased demand from covid on 19/20 = 16, 309.	15.982 entering treatment Stepped increase in activity through 2021/22 Activity 2nd half of 2021/22 equivalent to 17,183 p.a.	*Plan:* Expansion of the IAPT service in line with the NHS long term plan, new central team, increased on-line, *Dealing with Covid* programme *Investment*: £616,000 FYE of 20/21 investment + £284,000 21/22 investment *Workforce*: c.40wte Q1-Q3 Further increased capacity from Q4 to be reviewed and agreed.
Liaison Mental Health (within A&E and general hospital wards)	6,092 referrals	Supressed demand: 5,819 in 20/21 (-4.4% on 19/20) 20% increased demand from covid on 19/20 = 7,310	c7,000 referrals	*Plan*: Expand service to enable more cases and better resilience out of hours. *Workforce*: 2 wte nursing increase
Single Point of Access	10,036 referrals in 2019/20 2,782 Assessments in 2019/ 20 428 crisis, 1,266 routine 1,088 medical	Supressed demand: referrals in 2020/21 static at 9,977, but need for assessments increased by 285 (10.2%) in 2020/21 Referral demand in Q4 was 2,746, equivalent to a 9% increase on 19/20. 20% increased demand from covid on 19/20 = 12,043	12,000 referrals	*Plan*: Service pathway and resource capacity remodelling alongside re-design of the crisis care pathway and access arrangements. Waiting list initiative being scoped *Investment*: no additional planned currently. Waiting list initiative proposal to be reviewed and confirmed with CCG. *Workforce*: Review in line with above.
Specialist Community Perinatal Service	643 referrals in 2019/20 294 accessing services in 2019/20 (achieved LTP target)	Supressed referral demand: 606 referrals in 2020/21 down by 5.7% on 19/20. 229 accessed services in 20/21 (down on previous year re face to face) but if phone support included 367, a 25% increase on 19/20 2021/22 LTP target would be 562 entering treatment. 20% increased demand on 19/20 already evident.	2020/21 activity to continue until agreement reached re delivery of LTP trajectory for 2021/22 (562 people accessing services)	*Plan*: Perinatal MH - Expansion of service provision to see more clients and extend therapeutic offer. *Investment*: £415,000 FYE of 20/21 investment + £295,000 21/22 investment Investment plan not finalised regarding regional service in respect of capacity and investment. *Workforce*: to be finalised in line with final agreed plan.

Service	2019-20 Activity (1)	Demand assumptions (2)	2021-22 activity plan (1)	2021-22 capacity plan
Community mental health services, including primary care mental health transformation. Increased demand modelled at 20% increased from covid would result in 100 additional referrals to recovery services and 400 additional people on the recovery services caseloads.				
Primary care mental health service (new service)	855 people entered treatment (June 20-March 21) c.1,026 FYE	1,239 people entering treatment. LTP projection for 2021/22. 2,523 for 2022/23. 20% increased demand from covid = 1,231	1,239 people enter treatment	*Plan*: Extend the new Primary & Community Mental Health Service from 4 to 15 Primary Care Networks for adults and older adults. *Investment*: £2.4m 20/21 FYE increasing to £3.3m during 2021-22. Alliance model with SHSC, PCS, MIND & VSCE. £1.4m invested within SHSC. *Workforce*: 39 wte in 20/21 (28 wte in SHSC), increasing to 55 wte in 21/22 (30 wte in SHSC)
Assertive Outreach	NA	New service expected to support 80-100 people per annum currently receiving care from Recovery services.	Recovery team caseload capacity increased by 80-100	*Plan*: Establish Assertive Outreach Team *Investment*: £924,000 FYE of 20/21 investment *Workforce*: c.16wte
Early Intervention in Psychosis	341 people on caseload 2019/20 398 people on caseload 2020/21	ARMS pathway will result in an extra 100 people supported through assessment and treatment.	Capacity increased by 100	*Plan*: Delivery of At-Risk Mental State Pathway (ARMS) and services accredited. *Investment*: £440,000 FYE of 20/21 investment *Workforce*: c.6.4wte
Crisis services				
Crisis Resolution & Home Treatment	1,292 referrals in 2019/20 1,293 referrals in 2020/21	Extend home treatment services to cover the full 24/7 period. 20% increased demand from covid on 19/20 = 1,551	Capacity to provide treatment on a 24/7 basis	*Plan*: Establish 24/7 pathway *Investment*: £1.5m FYE of 20/21 investment *Workforce*: c16wte
Place of Safety	412 admissions 2019/20 543 admissions 2020/21	131 increased admissions during 2020/21, up 31.7% on 2019/20.	Maintain current levels.	*Plan*: Improvement plan in respect of Crisis Care Pathway and CRHT (above) *Investment*: nil planned *Workforce*: nil planned

Service	2019-20 Activity (1)	Demand assumptions (2)	2021-22 activity plan (1)	2021-22 capacity plan
Acute inpatient care				
Acute inpatient care	509 admissions 2019/20 + 29 OOA. 479 admissions 2020/21 + 115 OOA	Equivalent of 1,833 beds of capacity to address out of area admissions/ treatment demand and deliver 95% occupancy. Increased prevalence in acute care demands from covid impact.	1,833 days of acute inpatient care required (equivalent to 5 beds)	Increased capacity plan targeted at creating additional and alternative capacity (see below), and pathway improvements reducing length of stay and reducing delayed transfers of care.
Commissioning of additional acute inpatient capacity	NA	See above	6 acute and 3 PICU beds additional capacity	Plan approved to explore procuring additional inpatient capacity through another provider
Woodland View Step Down	NA	See above	10 bedded facility	*Plan*: Capital/ build works completed. *Investment*: revenue plan to be confirmed via business case. c£0.5m. *Workforce*: sub-contract arrangement

Note:
(1) Data source: Trust Integrated Performance and Quality Report reporting
(2) Covid demand assumptions based on Tees, Esk & Wear Valleys FT Mental Health Surge Prediction Tool

Appendix 2

Comparative Matrix of Four Demand Forecasting Models (source: Mental Health Systems Improvement Network)

Description	Strengths	Caveats
TEWV Mental Health Surge Prediction Tool **What it does** An Excel based tool designed to support commissioning and service planning across the TEWV geographical footprint. The tool uses national and international evidence in combination with local and national data to perform calculations of estimated additional population prevalence and demand for services. This is configurable at system and provider level for the 0-17; 18-64 and 65+ age groups. The tool has been developed in collaboration between TEWV, County Durham, Tees Valley, North Yorkshire, Vale of York CCGs (clinicians, R&D, planners, public health etc.)	**Main strengths** • Highly helpful to local service planning and commissioning, anticipating workforce needs at system level etc. • Ease of use and accessibility to a wide range of people • Efforts have been undertaken to provide estimates for socially excluded groups of interest to service planners where the evidence base is limited • Calculations are configurable by the user to account for the proportion of system demand seen within an individual organisation • Transparent descriptions of evidence used, assumptions and calculation mechanics are provided	**Caveats** • Further descriptions/grading of the degree of confidence in the logic/evidence/assumptions used for each prevalence calculation would be helpful • Assumptions based on local data may not be generalised to other areas, and error could be amplified if scaled up to model at national level • Application of an increased prevalence estimates to current service access data for adult mental health could mask any changes in the gap between prevalence and access • Some error in estimation is possible

Forecast Modelling Toolkit
 	
What it does
 	
This toolkit has been devised for local areas to calculate a forecast of additional demand for mental health services in England, resulting from the COVID-19 pandemic.
 	
The Forecast Modelling Tool has been developed in collaboration between the Centre for Mental Health and NHS – Cheshire and Wirral FT, Newcastle and Gateshead CCG, Lancashire and South Cumbria FT, NHS England and NHS Improvement South
	Main Strengths
	
	• Developed only using published evidence, with strict criteria for inclusion based on research quality standards and generalisability to a UK setting. No expert opinions or local/national data analyses are driving assumptions or outputs.
	• High levels of transparency about what was used to construct the model and why is available to users via a detailed resource pack
	• The construction of how service demand is
		Caveats
		
		• The adherence to only high-quality published research limits the detail that can be produced for specific subsets of the population.
		• Assumptions are limited by the lack of research evidence in a number of areas, including:
		  • Rates of comorbidity between mental health conditions
		  • Spontaneous recovery rates

East.	estimated aims to give comparability with the 'percentage of prevalence' approach used in existing national mental health access targets. • Key variables subject to uncertainty (discount rate and access rate) are shown simply and prominently in the model, which can be locally configured alongside local population figures.	• Time horizons over which demand is anticipated to occur • The tool does not model the impact of the return of suppressed and / COVID-altered demand (e.g. escalation)
Midland Partnership NHSFT Mental Health Dashboard **What it does** A web-based dashboard run in PowerBi, designed to support systems and providers across the West Midlands. The dashboard uses national and international evidence, combined with local and national published datasets. Populations can be segmented the into sub-groups and conditions, and assumptions from the literature are applied to calculate potential increases in prevalence. The tool also performs supressed demand calculations.	**Main strengths** • Highly modifiable parameters; including ability to show relevant information by different area, Trust or GP makes it highly helpful to local service planning, anticipating workforce needs at system level etc. • Innovative use of nationally published data on primary care, MH prevalence, COVID discharges and healthcare workers enables local systems to drill down to making estimations at individual GP practice level and/or local authority level. • Ease of use and accessibility to a wide range of people • Effort to provide estimates for socially excluded groups where the evidence base is limited • Incorporates anticipated changes to psychosis prevalence and service activity • Transparent descriptions of evidence used, assumptions made and calculation mechanics • Configurability to report at regional, ICS, ICP, PCN, Trust level • Has supported a range of commissioning and service planning decisions locally	**Caveats** • Assumptions based on local data (e.g. hospital discharge rates) may not be generalised to other areas, and error could be amplified if scaled up to model at national level • Service demand out of scope for the current iteration of the tool. Therefore, user error in translating population estimates into service demand may be incorrect if assumptions around the access gap and double counting are incorrect • Some error in estimation possible due to: • Some possible error where clinician/ data informed assumptions are used – caveats around data to be treated with caution are clearly labelled in the tool. • Straight line prevalence increase estimates cannot account for spontaneous recovery or varying lags in presentation

The Strategy Unit / Mersey Care Model	Strengths	Caveats
What it does A web-based system dynamic model, combining national and international evidence with local and national published datasets to estimate how prevalence of COVID generated mental health needs may translate into service demand across a range of primary and secondary care services under different scenarios. Populations can be segmented the into sub-groups and conditions, and assumptions from the literature are applied to calculate potential increases in prevalence. Service demand is estimated for referrals, treatments, and volume of service appointments required. Local supressed demand calculations can also be added.	• Highly modifiable parameters. The ability to show relevant demand information by different service descriptors makes it highly helpful to local service planning, anticipating workforce needs at system level etc. • Limited local data is required by end user to begin using the model • Translates prevalence into service demand for referrals, treatments, and appointments needed, using attrition and recovery data • Monthly 3-year service demand horizon for different aspects of primary and secondary care with different scenarios for when different presentations will occur for different groups • Innovative and highly detailed 'realistic' pathway variables developed using MHSDS data on service activity, and mapping 'which patients go where'	• The conceptual model for pathway flow simplifies the referral pathways that may be experienced in the real world. More complex pathways are not explicitly modelled. • Each local mental health service is configured distinctly. To produce a model with national relevance, it was necessary for to impose a generic national service model. Differences in local service structures and coding practices introduces some risks to validity. • The research evidence relating to COVID-19 and its impacts changes quickly. A pragmatic literature search was completed in June to allow for model design and development and is certainly out-of-date. The interactive nature of the tool will enable users to overwrite estimates of impact on population groups with more recent or robust evidence. • Anecdotally, we understand that the COVID-19 pandemic and associated lockdown measures will suppress health-seeking behaviour. The model does not explicitly model this effect although has included a susceptibility/resilience variable which may do so implicitly. This may lead to an overstatement of the rate at which demand is converted into referrals and demand. • The model deliberately estimates referrals and activity levels as if capacity were not constrained. In practice some services may be unable to manage the volume of referrals and could therefore develop large waiting lists and times if this is not considered in scenario planning.