

## **Implementation of a Stepped Care approach to Depression Services in North West England**

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*CSIP NW are using a novel approach to communicate and accelerate implementation of a stepped care approach to depression services in North West England. They are collaborating with Symmetric SD to develop a whole system simulation model, which combines the NICE guidelines for depression services with economic and resource allocation factors. This model is capable of demonstrating to local health communities how rebalancing resources across the whole patient pathway over time can result in significantly more patients being more appropriately treated, without any additional funding. The model is being used to support a series of collaborative workshops. By providing an 'ideal' case for services, the model can help each member of the collaborative operate a change management process. They can compare their own reality against the ideal and identify gaps in commissioning, service provision and workforce together with incremental changes to move closer to the ideal service configuration.*

### **The NICE Guidelines for Depression and Implementation Issues**

The National Institute for Clinical Excellence (NICE, 2004) guidelines for a stepped care approach to depression services specify clinically-proven, best-practice pathways to care via a series of steps, which recognise patient choice and preference. These steps involve: watchful waiting, followed by primary care led guided self help and other brief therapies, which only then lead to psychological interventions or medication and perhaps eventually to case management and longer-term specialist treatment. The main aim of a stepped care approach to depression is to simplify the patient pathways, provide access to more patients and to improve patient well-being and cost reduction by directing patient referrals, where appropriate, to low cost community based treatments before high cost institutional or specialist services.

However, the guidelines have not been supported by robust implementation strategies and on the whole the uptake is left to local arrangements. Consequently, the concept of a stepped care approach to depression services is at very different stages of implementation across England and Wales.

Service providers (GPs and primary care mental health workers) are concerned that implementing the guidelines will take a lot of effort and cost. Commissioners are struggling with decisions to reallocate finite resources across a stepped system of care, where a large proportion of the available resources (people, money) are locked downstream in specialist services. The key challenge they raise is how they can make a case for the specialist part of the system to look at possible disinvestments and up-streaming of resources. Apart from communication and engagement of all parts of the patient pathway, commissioners are also concerned with more detailed matters such as

the transition to stepped care, maintaining levels of care whilst adjusting current patient pathways at the same time creating new ones.

**Implementing a stepped approach to depression services in the North West of England – using a system dynamics modelling approach to avoid unintended consequences of stepped care for depression services.**

In order to address some of the implementation issues the NICE guidelines have been extended locally by the North West Development Centre of CSIP (Care Service Improvement Partnership), (National Institute for Mental Health England, Northwest region, 2004). The Northwest Care Services Improvement Partnership (CSIP) is at the centre of attempting to change individual and organisational behaviour in respect of clinical interventions and commissioning of appropriate and cost effective services for people with depression.

Since late 2004 CSIP NW has been utilising a system dynamics modelling approach (Wolstenholme, 2005) to support the implementation and dissemination of its guidelines and to attempt to avoid some of the potential unintended consequences. The model effort has been guided by both the localised guideline documentation and the help of an expert group of Mental Health clinicians, researchers and commissioners and is aimed at pre-empting the resource allocation issues of stepped care and addressing these in parallel with implementing the reform.

The decision to utilise a modelling approach to support the implementation of a stepped care approach to depression, rested on three elements:

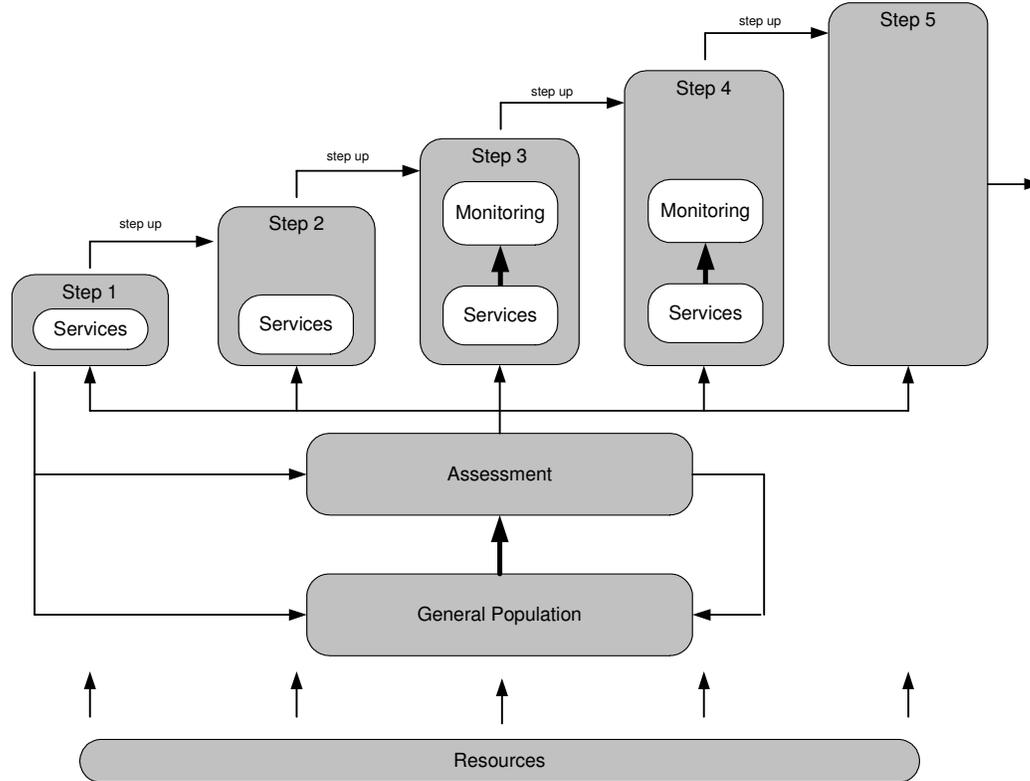
1. Documents are static and contain numerous hidden and often un-testable assumptions.
2. Whilst guidelines often represent best practice from a clinical perspective, they are often very light on the ‘hard’ economic factors (number of patients, finances, workforce) that commissioners require to support the types of decisions they make. The model incorporates and links the clinical pathways perspective with these factors
3. Commissioning decisions are highly complex. Simulation modelling is an excellent tool to support these decisions.

The objectives of modelling were:

- To improve definition of patient pathways and support meaningful whole system/pathway redesign
- To enable commissioners to engage in system/pathway redesign with the right skills and tools
- To address detailed economic and resource allocation issues
- To support the adoption of guidelines and positive practice to inform pathway/service redesign
- To facilitate the communication of the benefits of a stepped care approach to the delivery of depression services
- To increase commissioners’ active use of strategic scenario planning

**Description of the model**

Figure 1 illustrates the high-level structure of the basic simulation model currently being used with commissioning groups. Essentially, this represents a stock and flow structure of the CSIP NW depression guidelines, as informed by the expert group. Nothing in this structure is contrary to the agreed national and local guidelines.



**Figure 1: High level map of the depression guidelines model**

Figure 1 shows that there is a general population of people in any mental health system. This could be nationally or locally. Some suffer from depression and come in contact with primary services. At this point they receive an assessment for depression. Based on this assessment of need, people flow to one of five service steps. Steps 1-3 are predominantly primary care delivered whilst steps 4-5 are secondary/tertiary acute services. Within each of these steps services are delivered and if people improve then they flow back to the general population or for a re-assessment. If, however, a course of treatment within any particular step does not improve the patient's condition they either receive another package of care within that step or they step up to the next step. Decisions at these points are based on evidence and clinical judgement.

In addition to the patient pathway/flow elements described above the model incorporates the resource elements which are critical to commissioners. These resources include people and money.

Key elements that form the basis of the model include:

- A stepped care approach focusing on steps 1 to 4
- A chronic disease or long-term conditions orientation
- A population health perspective looking at the health of an entire population
- Care pathway and patient flow thinking

In addition three overarching criteria focus the modelling. Any scenario run through the model is initially assessed against these criteria.

- System effectiveness as measured by the number of people the system can treat under different scenario conditions.
- Access (The length of time that patients wait for services)
- Cost effectiveness (The interaction of the two elements above to create the most advantageous outputs)

Any model has at its core a number of assumptions. The value of this modelling approach is that these assumptions can be modified and new scenarios tested, either by users themselves or live in workshops. Some of the key model assumptions include:

- The percentages of people assessed as requiring different service steps
- The rates at which people relapse after recovering
- The percentages of people that remit, require additional services within the same step or step up
- The length of the time delays in establishing a new service step or decommissioning others

### What the model enables

The model has been used to undertake detailed scenario analysis with commissioning groups who can adjust the data and policies of the model to suit their interests. To demonstrate this some example uses of the model are described, which provide general insights.

The basic run of the model has been configured to represent the existing mental health services in the UK, operating as a two step system as existed during the 1980s and 1990s. This is achieved simply by switching off steps 2 and 3 in Figure 1.

Figure 2 shows the wait list output from the model for this base run where it can be seen that there is a significant wait for step 4 services as observed in current practice. This simply will get longer over time unless some actions are taken.

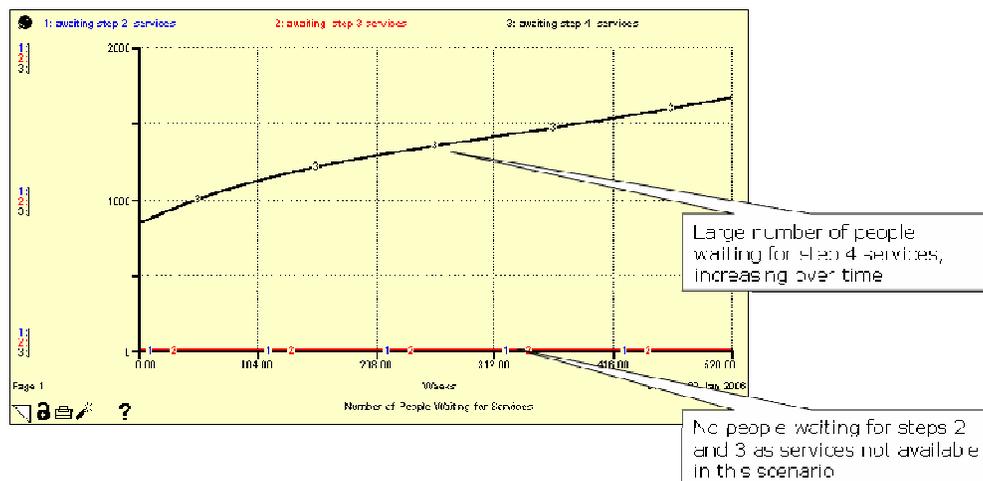
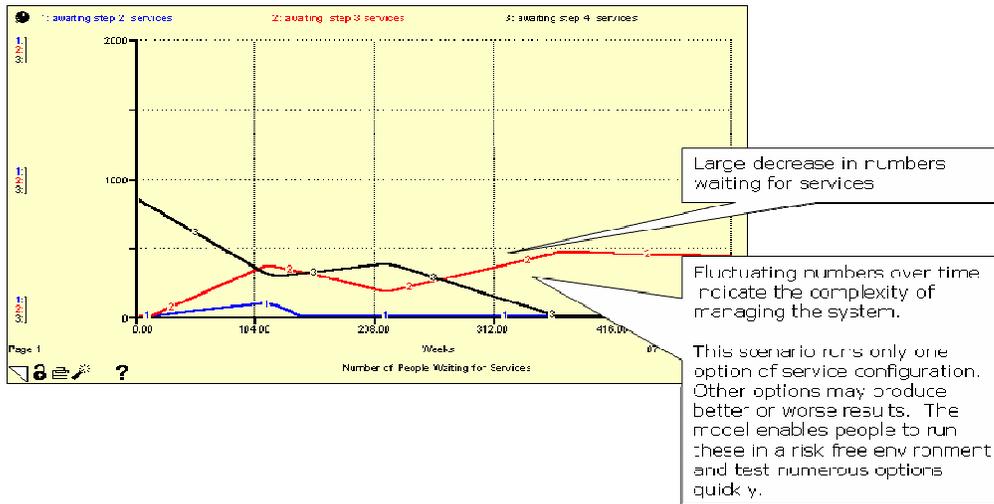


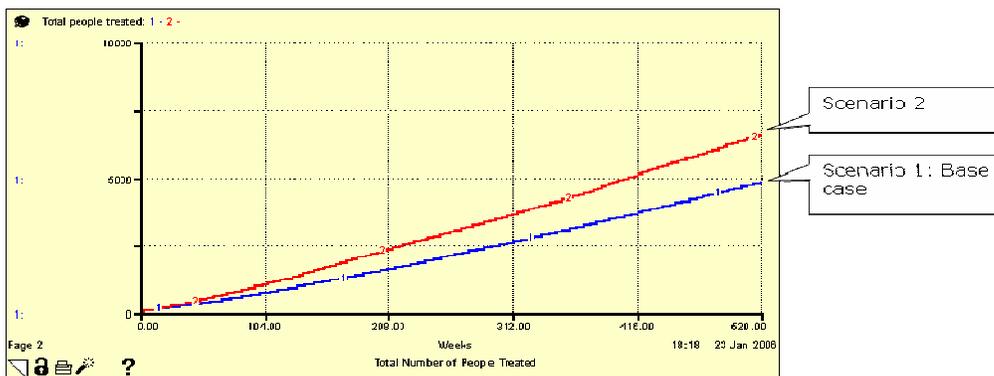
Figure 2: Base case model output

In contrast, when the model is configured to represent fully-implemented guideline-appropriate stepped services (all 4 steps switched on) there is a significant reduction in the total numbers of people waiting (Figure 3). The exact numbers here depend on the extent to which financial resources are reallocated from the later steps to the new steps, but with a fixed pot of resources big gains in wait times are intimated. This is achieved because steps 2 and 3 provide a more appropriate mix of services for people with less severe forms of depression.



**Figure 3: Sample scenario model output**

Figure 4 shows a comparative graph of the total numbers of patients treated between the two configurations of the system and it can be seen that a stepped approach gives significant benefits for this performance measure – the system is more efficient at delivering services to those suffering from depression.

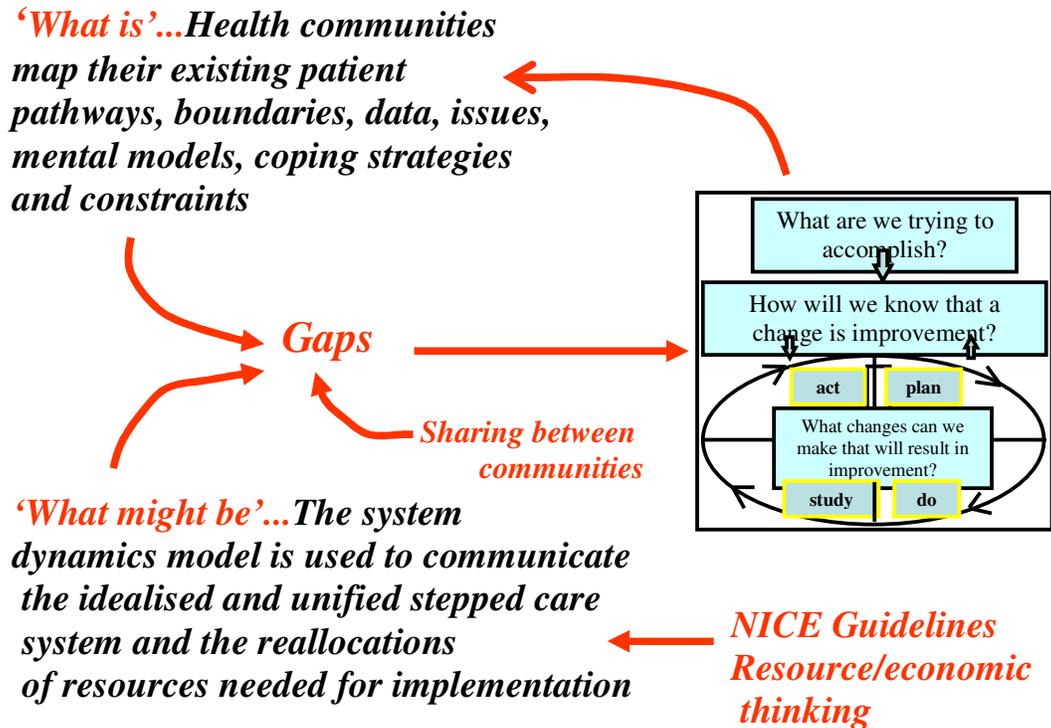


**Figure 4: Comparing base case and scenario 2 output**

Further benefits also accrue as soon as additional policies made available by the stepped approach are tested. An example here is the opportunity to have the majority of patients pass through step 2 before being placed in any other service step.

**Using the model to support implementation of the guidelines – running a series of model-supported collaborative workshops.**

As a unifying theory of approved clinical guideline and the economics of resource reallocation, the model provides a representation of the ideal stepped care system for depression services to which local health communities might aspire and Figure 5 describes its role to support collaborative workshops for representatives of North West mental health communities. Ten communities are taking part in the collaborative process.

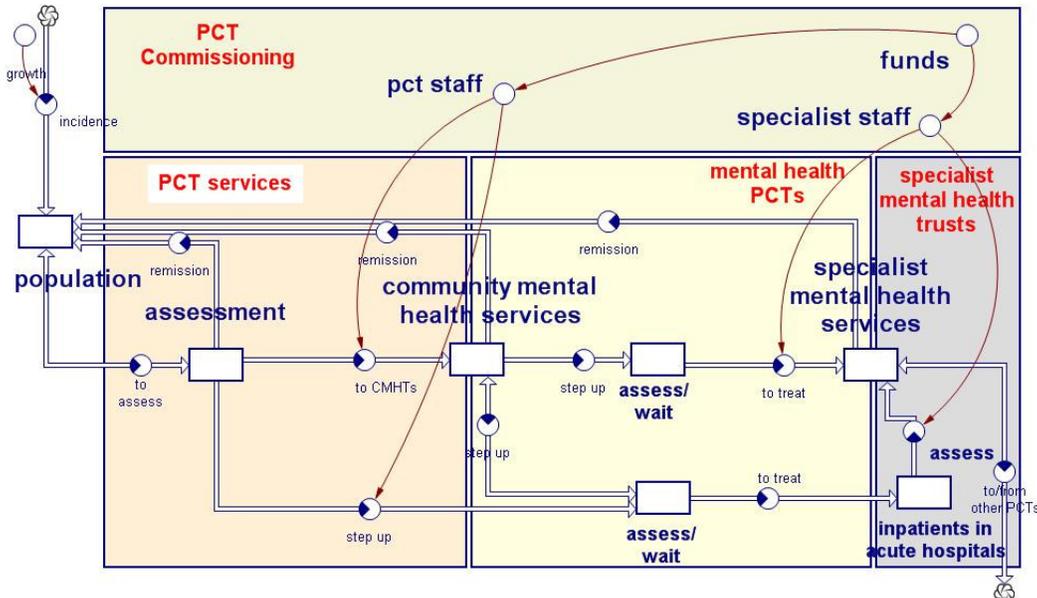


**Figure 5: Model-supported collaborative process**

The model-supported collaborative process facilitates incremental changes within each mental health community from their current reality (‘what is’) towards the ideal (‘what might be’). Each community is encouraged to map their own services consisting of its pathways, boundaries, data, issues, and constraints. In particular, to articulate the ‘coping strategies’ used to match supply of services with demand and to contrast this with the ideal. This process identifies gaps in commissioning practice, service provision and workforce. The idea is for the communities to then progressively undertake initiatives to close these gaps, often by using techniques such as process improvement via PDSA (plan-act-study-do) improvement cycles and to share their successes and learning with other communities.

## Some early factors emerging from the collaborative process

Figure 6 shows a generic map capturing some of the major problems being faced by a number of mental health communities.



**Figure 6: Generic map capturing some of the current issues of existing mental health practice**

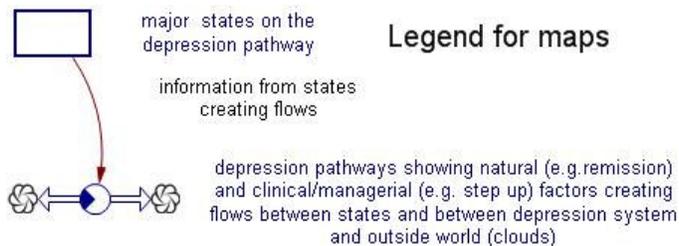
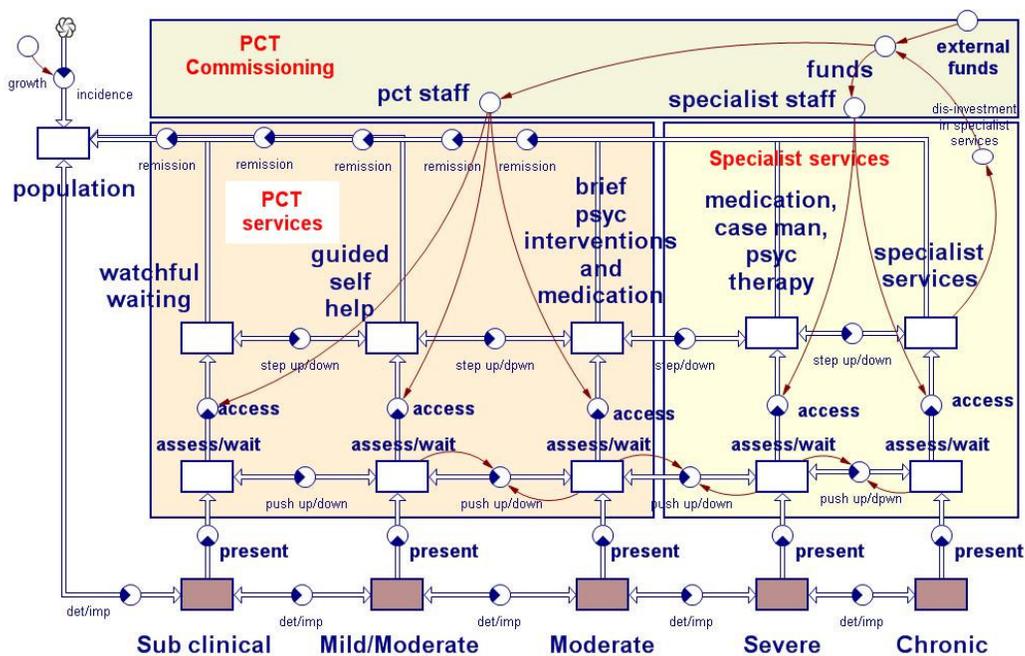


Figure 6 suggests that many communities are essentially operating a two step system which has evolved, rather than been designed. Many treatment pathways are provided at each step by a complex mix of providers and multiple assessment points. Excessive wait times exist for specialist services and the system is characterised by a high level of risk aversion. Essentially, people seem to either receive no treatment or extensive and expensive treatment after a long wait. It is also common for patients to get caught between these states.

In contrast the ideal stepped care system shown in Figure 7 seems to offer a designed, gradated 5/6 step system with much simpler patient pathways and service provider boundaries. This system would seem to suggest the need for communities to rationalise and balance their approach to risk management and to accept a trade off between treating a few people very well after long waits or providing some treatment quickly to many people.



**Figure 7: The structure of stepped care services for depression**

Early feedback from participants suggests that the collaborative process is significantly accelerating implementation of stepped care in all participant PCTs.

Four PCTs, where stepped care is being piloted, would suggest that the preferred method of implementing stepped care is to create Primary Care Mental Health teams for services in steps 1-3, commissioned by PCTs but largely staffed and managed by Specialist Mental Health Trusts. This arrangement creates the necessary staffing resources at each step without enormous reallocations of money and people shifts, provides flexibility and facilitates the possibility of later GP practice-based commissioning of services.

A number of PCTs are reporting reduced waiting times. In one PCT at an advanced stage of implementation of stepped care, overall numbers of people referred seem to be similar to the previous service, but that there are some big differences in terms of waiting times and throughput. The average waiting time in the pilot is 3 weeks (the aim was 2 weeks). This compares to an 8 month wait for step 4, which was the only step available before the pilot. One observation was:

“in effect we have offered treatment to everyone since the start of the pilot, none of whom would have been seen in the traditional model”

The work suggests that 75% of people have "stayed" in the new step two, that it to say they have not been stepped up to step 3. This has reduced demand at step three from 120 to 16 over a 5 month period. There have been no referrals to step 4 (psychology) so far.

For those PCTs at an early stage of implementation of stepped care the major benefits of the collaborative process centre on the benefits of learning from others and the need to focus on ownership and integration of services.

## **Conclusions**

The model-supported collaborative process to assist the implementation of a stepped care approach to depression in the North West of England has demonstrated considerable benefits. The importance of providing very visual and animated communication of the ideal stepped care system as provided by the system dynamics simulation approach has acted as a catalyst to implementation. A number of communities are actively involved in an engaging process to address the complexities of commissioning & service redesign and many are showing very positive results.

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