

Effective operational management relies on demand and capacity analysis, allowing us to use resources wisely, provide excellent care, make informed decisions, and promote ongoing improvement. This is our story of how we created a tool to support with this.

The problem...

Historically demand and capacity analysis was largely undertaken on bespoke excel spreadsheets with a variety of methodologies in use. Resulting in inconsistent approaches and difficulty in maintenance. National tools are typically designed for acute settings and commercial tools are expensive and often not well suited to the variety of pathways present in a community setting.

The solution...

Create an accessible, user-friendly centralised tool for all trust services to independently perform demand and capacity analyses, adaptable to various use cases and pathways present across CCS.



Initially we reviewed different approaches and tools used across the trust and gathered requirements from key stakeholders.

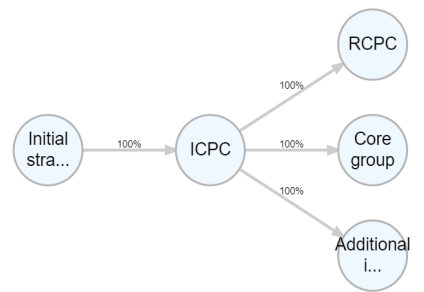
Next, we began outlining the most effective approach for representing different pathways and how to organise the required data. Once happy we designed a user interface and figured out a centralised hosting solution.

The initial prototype was tested exclusively with the Improvement and Transformation team. After receiving feedback and making necessary refinements, we conducted a pilot with services eager to engage in analysis.

Our demand and capacity tool was built using 'open-source' coding language 'R' which enables us to have greater flexibility in updating and adding new features.

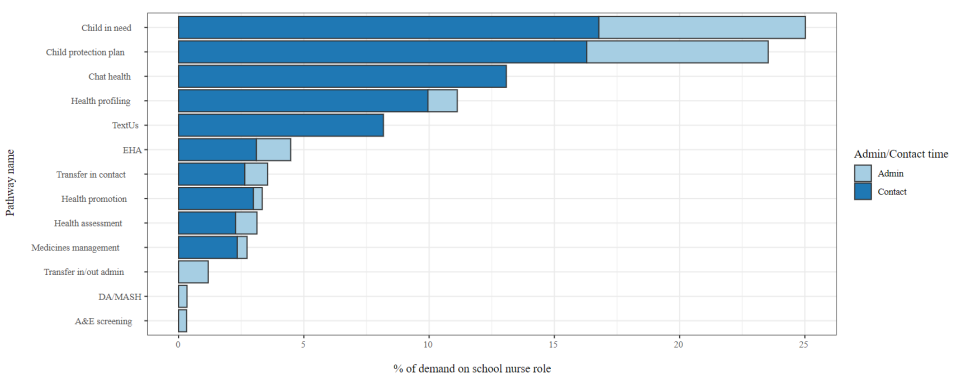
There are 4 key areas in the tool, demand data capture, capacity data information which enables the user to split by roles, teams etc and analysis section which provides analysis of the data provided.

Advanced functionality option has been added to support more detailed analyses.



- Used to support demand and capacity analysis for 15 different services
- Has replaced an expensive commercial tool used by the 0-19 Healthy Child Programme services across the trust, saving approx. £10k a year.
- Has been instrumental in supporting bids for new service contracts.

[d&c training video v1.mp4](#)



Further developments of this tool have been running quarterly and new features are constantly in the pipeline. Users are able to 'request' changes via the tool which are then reviewed and added to the development backlog in priority order.

At present, the tool is available on the central data science platform, with access facilitated by the Improvement and Transformation team. This setup will continue until the launch of a comprehensive demand and capacity masterclass. This masterclass emphasises that the demand and capacity tool serves as a support for analysis, while also providing a more extensive understanding of demand and capacity.