Data becomes the lifeblood of NHS Blood and Transplant

Adatis implements a self-service data platform to improve blood, organ and stem cell donation and supply

Blood is considered critical national infrastructure - as well as being vital to each and every one of us. The NHS Blood and Transplant organisation is now able to improve donor sessions and manage blood stocks and its processes through data dashboards and technology deployed in a partnership with Adatis.

NHS Blood and Transplant is a special health authority sponsored by the UK government's Department of Health and Social Care. Across England, the organisation is responsible for the collection and supply of blood, stem cells, and tissues, with their services expanding to the rest of the United Kingdom for organ collection and supply.

Challenge

In October 2022, NHS Blood and Transplant had to issue its first-ever amber warning as national blood stock levels dipped to their lowest on record. This situation gave extra life to plans by the organisation to modernise its data technologies and usage.

NHS Blood and Transplant was rich in data but had access problems, with data sets not joined up and an excess of reports, many of which were not being used. Data needed to be easily accessible by those dealing with blood and transplant issues first-hand. "We wanted to put the right tools in front of our users and give them the knowledge," says Nick Breeds, Assistant Director of Solution Delivery at NHS Blood and Transplant. "They understand what they need from data, not IT," he adds.

NHS Blood and Transplant planned to provide its staff with insight into blood donation sessions, donor registrations and its workforce. Legacy technology was not providing the right levels of data access. Issues included information from the blood system being stored in data strings, making date-based access difficult.

Blood has a similar lifespan as milk, and NHS Blood and Transplant use many of the processes used by the dairy industry. So, being able to see blood stock levels by date is vitally important. "Each product has a different shelf life," Breeds says.

Approach

Following a review of data technologies, Microsoft introduced Adatis to NHS Blood and Transplant, and a proof of concept (PoC) was carried out. "They did a fantastic PoC that dealt with some really tricky problem-solving in just a couple of weeks, so they demonstrated the art of the possible," Breeds says. Following a tender process, Adatis was selected as the data partner for NHS Blood and Transplant.

The implementation of the Adatis data framework and Microsoft data technology foundations took six months. Then, work began on improving blood supply data.

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This first project involved improving access to data from the Blood Management System, essentially an Enterprise Resource Planning (ERP) application for blood processing. An incremental process then led to new dashboards and data processes for donor sessions and blood collection venues.

Adatis helped NHS Blood and Transplant to implement various Microsoft tools including Azure Data Lake, Azure Synapse and Power BI.

"Adatis has been very good at upskilling. We have some really good learners in our team, and they have benefited from lots of scheduled knowledge transfer sessions," Breeds says. Looking ahead, NHS Blood and Transplant is now using the Adatis managed service to guarantee that it has access to data experts when capacity or challenges arise.

Outcomes

1 Simplified Data Access

At the centre of this project was a need to simplify the data processes at NHS Blood and Transplant. Data is now more accessible and user-friendly, and no longer confined to complex systems and spreadsheets.

Adatis has helped NHS Blood and Transplant reduce its excess of reports and instead use dashboards with drill-down options. "It is one screen, and you can then do much more exploration," Breeds says. This is leading to quick decision-making by frontline NHS staff, who no longer have to make a request to IT for a report. "We have focused on simplification. Instead of 33 reports, there is one dashboard connected to all the dependent information."

Now, frontline experts in blood and transplant processes have data insights available to them.

2 Improved Analysis

Early benefits being delivered include analysis and improvements to donor sessions. The NHS Blood and Transplant data team has analysed patterns that lead to donor session cancellations, which is disruptive to donors and the entire supply chain. Data has revealed regional differences, the impact of weather or events such as a conference close to a donation venue. This information will better inform NHS Blood and Transplant and how it schedules its vital donation sessions. Breeds adds that data on incidents, such as a donor being bruised, could also be used to support staff training requirements.

The early successes of this project have resulted in a nomination for the UK Government's Project Delivery awards. This project has delivered on all the criteria the awards look for, including lower costs, better use of resources and faster decision-making.

3 Understanding Donors and Recipients

NHS Blood and Transplant will also gain improved insight into its blood, plasma and tissue stock types and then do forecasting. This, in turn, will lead to an ability to target donors who can help with less common blood types and those from ethnic minorities. In the near future, NHS Blood and Transplant will also be able to understand how the blood is used by NHS hospitals across England.

Breeds says: "We are en route to improve all areas of a multifaceted organisation. We are now able to put information in front of as many people as possible, which will really improve forecasting."

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About Adatis

Adatis are a leading Microsoft - specialist Data & AI and Business Intelligence consultancy. We work in flexible, agile and collaborative ways to help organisations unlock the power and value from their data.

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