

Case Study

Newborn Blood Spot Screening

Newborn blood spot screening is critical in identifying babies who have rare but serious metabolic and genetic disorders.



The Challenge

In India, many babies are born with some kind of metabolic or other genetic disorder every day. Every year over 40,000 babies are born with disorders which could be detected and treated if they were screened within few days of birth. Previously, the UK had similar challenges but by introducing a national newborn screening programme, nearly 780,000 babies have been screened.

The Solution

Our Screening Management and Reporting Tool (SMaRT) is one of the key components in delivering a successful Newborn Screening Programme. It tracks the baby through the entire pathway ensuring no babies are missed – it provides support, diagnoses, parental communication, quality assurance and parental education.

The Outcomes

Our Screening Management and Reporting Tool (SMaRT) is one of the key components in delivering a successful Newborn Screening Programme. In England, every newborn baby is offered a blood spot screen, ideally when they are five days old. In 2013/14 nearly 780,000 babies were screened, of which 1,350 babies were identified with one of the five congenital conditions (PKU, CHT, SCD, CF, MCADD) and treatment was provided.

The NHS newborn blood spot (NBS) screening programme aims to identify rare conditions that can lead to serious illness, development problems, and even death.

Northgate Public Services (NPS) works in partnership with the National Screening Committee (NSC) and Public Health England (PHE) to deliver a national failsafe information solution for the NHS newborn blood spot programme; ensuring all babies are screened for 9 rare but serious congenital health conditions.

The NPS Screening Management and Reporting Tool (SMaRT) for newborn blood spot screening tracks and captures data along the entire screening pathway. SMaRT manages the complete screening process, connecting parents, hospitals, healthcare professionals and laboratories seamlessly and in a timely manner. By doing so it ensures early detection and diagnosis, enabling immediate treatment of positively tested babies. Early treatment can improve these babies' health and prevent severe disability, and even death.



“The acknowledgement by judges at the HSJ of the first class work that has been carried out through this project goes a long way to making sure that this new system is taken up by other organisations”

Professor Kevin Fenton,
Director of Health and Wellbeing at PHE

“This will ensure that a greater number of babies with problems are identified at the earliest possible stage which will help doctors to deliver faster and more effective treatment.”

Dr Anne Mackie,
Director of Programmes at the NSC

The English NBS programme screens for:

- sickle cell disease (SCD)
- cystic fibrosis (CF)
- congenital hypothyroidism (CHT)

The English NBS programme tests for 6 inherited metabolic diseases:

- phenylketonuria (PKU)
- medium-chain acylCoA dehydrogenase deficiency (MCADD)
- maple syrup urine disease (MSUD)
- isovaleric acidaemia (IVA)
- glutaric aciduria type 1 (GA1)
- homocystinuria (HCU)

Newborn blood spot wins an award

During 2014, the NBS team won the top 'Services' and were congratulated by Health Service Journal (HSJ) judges who said: 'the project is an innovative, yet simple for the NHS and social care while providing their families.'