CASE STUDY

Neonatal Screening

Customer Story

Egyptian Neonatal Screening Laboratory Is World's Largest

When the Egyptian Ministry of Health and Population (MOHP) first approached PerkinElmer and its distribution partner HVD Vertriebs GMBH with the idea of building a new, centralized laboratory for neonatal screening, the operative phrase was "Think big."

Meeting the Needs of a Growing Population

With nearly 84 million people and 2.6 million births each year, Egypt has the largest and fastest growing population in the Arab world. To meet the country's goal of providing free neonatal screening to all Egyptian newborns, MOHP worked with PerkinElmer to construct the Egyptian Newborn Screening Laboratory in Cairo. This state-of-the-art facility features PerkinElmer's Genetic Screening Processor® (GSP®) and Specimen Gate® Informatics, the most sophisticated neonatal screening tools available. In combination with PerkinElmer's assistance in significantly upgrading the laboratory's technology systems, the Egyptian Newborn Screening Laboratory now stands front and center as the world's largest such screening facility, based on the number of heel-prick tests for congenital hypothyroidism that it conducts each year.

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For the Better

Congenital hypothyroidism is a condition caused by thyroid hormone deficiency. It affects an estimated 1 in every 1,400 babies in the Middle East. If left untreated within the first few months of life, it can lead to severe growth issues and mental development delays. Treatment for the disorder consists of oral thyroid medication, with the dose and hormone levels monitored and adjusted as a child grows.

Becoming a Global Role Model

Egypt has been especially proactive in screening newborns for congenital hypothyroidism, among other metabolic conditions, over the past decade. With the opening of the new Egyptian Newborn Screening Laboratory, that testing initiative has reached new heights in providing faster, more accurate results. The laboratory's added efficiencies have also replaced the need for 14 separate screening labs around the country, redirecting the funds used at those locations to be reinvested into the national screening program. Blood samples are now collected from newborns via heel-prick at more than 4,000 Primary Health Care facilities throughout Egypt, and those dried blood spot sample cards are being analyzed at the Cairo facility.

"The significant upgrade of Egypt's national screening system will provide critical early insights into the health of newborns with advanced testing and ultimately, opportunities for earlier intervention when necessary. Test results will also be stored in a central database, providing Egyptian healthcare professionals with timely information and improved population health insights," says Hanna Halme, vice president, Diagnostics, at PerkinElmer.

Equally important, the Egyptian Newborn Screening Laboratory stands as a testament to Egypt's commitment to leveraging science to improve the health and safety of its people. In doing so, Egyptians have set the standard for how other countries around the world could manage newborn healthcare in the future.

Egyptian Newborn Screening Laboratory, Cairo, Egypt

Challenge:
Help centralize and advance Egypt's longstanding commitment to provide all Egyptian families with free, standardized screening and treatment for congenital hypothyroidism, a thyroid deficiency disorder that can cause growth problems and mental development delays.

Solution:
Commissioned by the Egyptian Ministry of Health and Population, PerkinElmer builds the world's largest neonatal screening laboratory in Cairo, based on the number of tests it processes annually. The facility opened in September, 2011.

Outcomes:
Offering state-of-the-art screening technologies, the Cairo-based laboratory has consolidated congenital hypothyroidism testing across Egypt, allowing the Ministry of Health and Population to close 14 regional screening facilities and redirect the savings into building the country's first national registry of genetic disorders.

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