Mediclinic introduces non-invasive prenatal testing as pa of basket of DNA-based diagnostic services

As women prioritise education and career pursuits, the average age of first-time mothers globally has surpasse 30, leading to potential risks associated with pregnancies at older ages.

Source: Pexels

While these decisions could result in higher risk pregnancies, innovation in medical technologies which offers cutting-edg non-invasive testing to identify foetal risks early on, can provide women with a greater sense of comfort should they decid to delay pregnancy.

Reasons abound such as general increasing costs of living, and a desire to focus initially on career building for the growi trend toward “later life” pregnancies. Whatever the cause, these choices are resulting in a higher proportion of women becoming pregnant after the age of 35.

According to Liani Smit, a medical geneticist working with Mediclinic Precise - an approach to healthcare that uses an individual’s genetic profile to customise their health management plan chromosomal abnormalities are common and can occur in up to 1 in 150 live births.

Informed decision-making

“The risk for some chromosomal conditions, such as Down syndrome, increases with maternal age, but chromosomal conditions can occur in any pregnancy. These conditions often have a significant impact on a baby’s health and development and in some cases life expectancy.”

Smit says that knowledge about the risk of an underlying chromosomal condition early in a pregnancy empowers parents and their treating clinician to make informed decisions about the management of the pregnancy in a timeous manner.

In an effort to provide South African mothers with greater peace of mind, Mediclinic recently announced the launch of saf non-invasive prenatal testing (Nipt) for expectant mothers as part of their DNA-based diagnostic and clinical interpretation services.

This is a recent addition to the Mediclinic Precise product offering, following the launch of Mediclinic Ancestry testing earl this year.

> *We understand that your pregnancy journey may leave you with many questions as you prepare for the arrival of your baby. Here are our top 10 questions (and answers) about non-invasive prenatal testing or NIPT. Mediclinic Precise is here for you! Learn more:… pic.twitter.com/YBg5a8Ol7i— Mediclinic SA (@Mediclinic) June 29, 2023*

Chromosomal condition assessment

Smit explains that Mediclinic Precise Nipt screens for common chromosomal conditions in the foetus, such as Down syndrome, Patau syndrome, Edwards syndrome, sex chromosome aneuploidies (chromosomal conditions caused by the loss or gain of a sex chromosome) and optional screening for up to five microdeletion syndromes which may be missed during routine prenatal screening.

In what can already be a stressful journey for parents-to-be, especially those who become pregnant later on in life, Smit emphasises that Nipt is designed to be as non-invasive as possible.

“Nipt is based on a simple blood test from the pregnant woman which examines the genetic profile of the foetus (or multiple foetuses) to understand the risks for specific genetic conditions from as early as nine weeks into pregnancy.”

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Utilising advanced DNA analysis

According to Lindsay Petersen, chief operations officer of Mediclinic Precise, unique technology is used to analyse cell-f DNA fragments in the mother’s bloodstream and can differentiate which DNA fragments are maternal and foetal in origin. the case of twins, this data can be interpreted independently for both foetuses.

“In collaboration with the patient’s doctor, who will complete a requisition form on behalf of the patient, Mediclinic Precise provides the consulting doctor expert guidance on the patient’s unique genetic report.

“The doctor will then relay the information and helps guide the family to best manage the pregnancy and make informed health-related decisions throughout their pregnancy and after the baby is born,” explains Petersen.

Petersen concludes that optimising cutting-edge technologies, such as next generation sequencing has several benefits. “ only will this provide peace-of-mind for expecting parents, but we believe it will advance the utilisation of precision medicin in South Africa and will offer a better understanding of the role of genetic markers in disease.”