Carrier Screening Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The carrier screening market is expected to register a CAGR of 9.8% over the forecast period (2022-2027).

COVID-19 had a significant impact on the growth of the market. The global carrier screening market faced limitations in growth due to the sudden imposition of the global lockdown restriction, which resulted in a reduction in the patient influx to genetic counselors. According to the study titled "The Impact of the Emergence of COVID?19 on Women's Prenatal Genetic testing decisions" published in Prenatal Diagnosis in march 2021, the COVID19 pandemic may influence pregnant women's decisions about prenatal genetic testing. Patients' access to and use of prenatal genetic tests may be impacted by the pandemic. However, genetics testing for the COVID-19 diagnosis increased during the pandemic. Hence, COVID-19 is expected to have a direct and indirect impact on the genetic testing market over the ongoing crisis period. However, the relaxation of the restrictions during the post-pandemic period contributed to the growth of the market.

The major factors for the growth of the carrier screening market include the increasing emphasis on early disease detection and prevention, and the rising application of screening tests in genetic disorders, which is expected to experience during the forecast period. For instance, the Centers for Disease Control and Prevention (CDC) data updated in May 2022, reported that Sickle cell disease affects millions of people throughout the world and is particularly common among those ancestors who came from sub-Saharan Africa, Spanish-speaking regions, such as South America, the Caribbean, and Central America, and also Saudi Arabis, India, and Mediterranean Countries.

The earlier a disease is diagnosed, the more likely it can be cured or successfully managed. Treating the disease early could also make the disease easier to live with. Early disease detection helps people plan, while they are still able to make important decisions regarding their health and support needs and on financial and legal matters. Genetic diseases, such as cystic fibrosis,

sickle cell anemia, and Tay-Sachs disease, are inherited disorders. Carrier testing for such diseases can provide information about a couple's risk of having a child with a genetic condition. Identification of the risk, before the onset of symptoms, is called predictive/presymptomatic testing. Many genetic disorders can be detected early during pregnancy. So, the consumer demand for safe and effective carrier tests is fueling the growth of this market. In addition, the adoption of carrier tests into regular clinical care offers a commercial advantage to the market. According to many studies, early detection of diseases can prevent them completely or at least decrease the complications of the diseases. Healthcare organizations in several countries are funding newborn screening to predict diseases, like cancers, which may occur later in adulthood.

Moreover, in June 2021 Grail launched the Galleri blood est, a groundbreaking multi-cancer screening diagnostic. The test was meant to screen people who may already have an elevated risk for cancer, such as adults over the age of 50.

However, social and ethical implications of carrier screening and high costs and reimbursement issues of carrier testing are restraining the market's growth.

Carrier Screening Market Trends

Molecular Screening Test Segment is Expected to Register Fastest Growth Rate during the Forecast Period

A molecular screening test identifies DNA mutations, which are variations in the genetic code that lead to decreased production of enzymes. It focuses on the mutations seen in one ethnic group. It involves a step-wise process of testing for common alleles, and if required, extensive gene analysis. Sequencing is a method of molecular screening, which is accomplished by reading across the DNA code of a specific gene to know if there are any known mutations. If the test results are negative, it reduces the chances that the individual is a carrier, however, it does not eliminate the chance of having a carrier gene, since it is possible that the mutation might not have been discovered yet through the current technology.

According to the World Health Organization 2020 report, second leading infectious disease, trailing only COVID-19 (but ahead of HIV/AIDS). In 2020, it was estimated that around 10 million people suffered from tuberculosis globally. This includes 5.6 million men, 3.3 million women, and 1.1 million children. Tuberculosis affects people of all ages and from all countries. The 30 most affected countries by tuberculosis accounted for 86% of new cases in 2020. India leads the pack with two-thirds of the total, followed by China, Indonesia, the Philippines, Pakistan, Nigeria, Bangladesh, and South Africa. Thus, increasing the prevalence and rising patient pool increased the demand for molecular screening over the period.

Furthermore, globally, there is an increasing incidence of cancer, which is driving market growth. For instance, according to GLOBOCAN 2020, there were 19,282,789 new cancer cases worldwide in 2020, with the number expected to rise to 28,887,940 cases by 2040. Therefore, the global incidence of cancer, as well as modern healthcare facilities, have been major drivers of the segment's growth

There is an expansion of molecular testing, as it has the potential to increase testing accuracies through technical benefits for many targeted disorders that may not be suggested to biochemical testing.

Thus, owing to the factors mentioned above, it is expected to drive market growth over the forecast period.

North America accounted for the Largest Share in the Global Market

North America is found to hold a major share of the carrier screening market and is expected to show a similar trend over the forecast period, without significant fluctuations.

According to the Globocon 2020, the new cancer cases diagnosed were 2,281,658 in the United States in 2020. Among all cancers, breast cancer had the highest incidence with 253,465 cases, followed by lung (227,875), prostate (209,512), and colon (101,809).

Many advances in genomic medicine and technological platforms have made possible low-cost, pan?ethnic, expanded carrier screening that enables obstetric care providers to offer screening for over 100 recessive genetic diseases.

However, the rapid integration of this genomic medicine into the routine obstetric practice has raised some concerns about the practical implementation of carrier testing.

According to the Centers for Disease Control and Prevention in July 2020, Sickle cell disease approximately affects 100,000 Americans. Thus, as the prevalence of genetic diseases is increasing every year, the usage of carrier screening is also expected to increase during the forecast period.

Moreover, during the COVID-19 pandemic, the United States Centers for Disease Control and Prevention (CDC) used a one-step PCR format to diagnose COVID-19. The assay was carried out by isolating RNA from the sample and adding it to the master mix containing forward and reverse primers, nuclease-free water, and the reaction mixture (reverse transcriptase, polymerase, nucleotides, magnesium, and other additives). For instance, as per the Centers for Disease Control and Prevention (CDC), in the United States, antigen tests and nucleic acid amplification tests (NAATs) were used as diagnostic tests to detect infection with SARS-CoV-2. Viral tests were used as screening tests to reduce the transmission of SARS-CoV-2 by identifying infected persons who need to isolate themselves from others.

Thus, considering above mentioned factors is expected to fuel the market growth in the North American region over the forecast period.

Carrier Screening Market Competitor Analysis

The Carrier Screening Market is fragmented and competitive and consists of several major players. In terms of market share, a few of the major players are currently dominating the market.The presence of major market players, such as Abbott, F. Hoffmann-La Roche AG, Cepheid (Danaher Corporation), Illumina Inc., and Thermo Fisher Scientific Inc, in turn, is increasing the overall competitive rivalry of the market.

Additional Benefits:

  The market estimate (ME) sheet in Excel format
 3 months of analyst support

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