Diagnostic industry to grow steadily at $12.3B in 2020

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The healthcare industry is amid a major paradigm shift. Big data and artificial intelligence are arguably the most significant revolution in healthcare in the last decade. Reports by Frost & Sullivan, expects healthcare and diagnostic industry to generate a revenue of $6.7 billion by 2021. Diagnosis is the first step in any kind of disease management and plays a significant role in the medical treatment process.

India's diagnostic Industry is worth $9 billion and the market is growing every year and more people are becoming aware of the latest technologies such as next generation sequencing and the latest imaging techniques . The diagnostic industry is expected to grow steadily at $12.3 billion in 2020. It has witnessed a transformational shift as the service providers are taking up automation and other digital technologies to provide better service to their customers. In the current world of artificial intelligence and digitization in clinical labs, manufacturers are providing instruments with remote services for seamless operations. One of the significant areas which will contribute towards this is the ever-evolving genomics industry.

Two decades ago, the only kinds of diagnostic test that a patient was aware of was a based on analyzing various biochemical parameters. Now, with the advent of artificial intelligence and next generation sequencing, diagnostic industry is not only able to provide routine diagnosis but also tailor-made diagnostics depending on the genetic make-up of an individual. This kind diagnosis is paving the way for precision medicine. With the help of next generation sequencing technology, it has become more possible than ever to sequence large number of genes at once and get exploratory insights that, were either not available or too difficult to obtain a few years back. The abundance of information available makes it possible to diagnose the disease accurately and take required action.

Genetic testing can help in identifying subgroups within a disease population. It is slowly gaining popularity for diagnosis and treatment in India. Genetic testing is particularly relevant and usefull in India due to our diversity. Tests such as Carrier Screening test are used to determine the risk of having children affected with genetic diseases. More than 1,000 genetic tests are currently in use, and many more are being developed. There are tests for infectious diseases like TB in which genetic test is done on the bacteria itself to asess the drug resistance of bacteria. This helps clinicians in prescribing the right drug basis the resistance level of the bacteria. With an increasing number of tests being done in India, many of them now costs half as much as they did five years ago and this cost is expected to decline further as awareness about genetic test increases.

As a predictive measure, genetic testing is often utilized in clinical trials as a secondary or exploratory measure, with an aim

to identify genes that exhibit notable differences between responding and non-responding patients, to guide future treatment. The common ground is a growing understanding that most of the variation in treatment is responsive to therapeutics is not random. Genetics can have a great impact on how therapies and drugs affect patients.

Paediatrics, foetal medicine, oncology and haematology may use genetic testing more actively than other departments. Around 80% of the 7,000-odd rare diseases are genetic in origin. Also, while price of genetic tests has come down significantly over the years affordability amongst all segments of patients is still a concern. Government and insurance companies should come together to create policies under which the cost can be covered under health insurance schemes.

With the rise of rare diseases, complex chronic ailments such as diabetes, coronary artery diseases and cancer and infectious diseases such as TB, we feel that there are enough opportunities for diagnostic players to collaborate with the government and private companies on causes that will ease the burden on the healthcare ecosystem of the country. Aggregating, integrating patient data and applying big data analytical techniques will help in developing better models which will enable the doctors in making better clinical decisions.

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