BioSpect
the business of Bi
24 years of leveraging the business of Bio
www.biospectrumindia.co

Mapping human health

30 May 2017 | Views

People mostly realise what good health is when they fall sick



What exactly is good health? People mostly realise what good health is when they fall sick. Defining good health is thus essential, as being planned to do by Verily, Google's former life sciences arm and now owned by Alphabet. In partnership with Duke University School of Medicine and Stanford Medicine in US, it has launched Project baseline, a systematic and broad effort designed to develop a well-defined reference or baseline for good health.

The study is being done in two sites each in two US cities and will collect health data of 10,000 people for four years. Some of them will be in a good health while some others will be those who are at high risk of chronic diseases like diabetes, CVDs etc. Their health parameters will be tracked using sophisticated devices and sequencing their genomes.

It will collect large broad phenotypic health data in number of forms like clinical, imaging, self-reported, behavioral, from sensors and biospecimen samples. It will be used to develop baseline map of human health and to get insight into transition from health to disease.

Such a type of study is very significant since generally physicians peep into someone's body, through various medical devices, only when the sickness has struck. They treat illness looking at the symptoms as and when they develop. Very rarely they get to examine a healthy body and the process of how it catches the disease. As a result, physicians treat disease without a well-defined reference of healthy biochemistry.

Through the collected data, researchers hope to find out early warning signs for disease. If that happens then it will be an important development in treating a disease. This may completely revolutionise the medical interventions and will highly improve the success rate.

Despite generating large data, selection of only two sites each in two cities in one country may lead to getting some restricted results as various factors like environment & weather, food, genetics, habits and other surroundings play a very crucial role in human health. That diversity may not represent in the data collected from only two cities in one country despite the claim by the researchers that by focusing on the health of a broad population they can have a meaningful impact on the well-being of patients around the world.

Such studies face constraint of having more sites as it is difficult to have several sites together. Still, to gather much wider data more sites from different regions are needed. The researchers have said that the sites may increase. But, while selecting more sites they need to consider other factors like geographical regions, weather, environment, types of people, different diets etc. as they all affect the health.

The study, which is expected by some to transform the medical landscape, is not free from questions, doubts and concerns. Some experts feel that the database may oversimplify human biology, which is actually very complex and unpredictable. The experts have raised some questions over the utility of the study and feel that trivial or false trends will be seen in the data.

The researchers can also look at the traditional knowledge of medicines like Ayurveda or Chinese traditional medicines. Ayurveda has dealt with the concept of health in detail and its one aim is to maintain the health of healthy individual. Thus, it naturally has defined what perfect health is. Even Chinese traditional medicine may also have developed understanding of good health. This traditional wisdom may have its own limitations, but it surely can provide some direction to the modern efforts of understanding health.