

Vaccination should be viewed as a moral obligation to society: Dr Davinder Gill

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Vaccination is the most effective way of eliminating life-threatening infectious diseases and is estimated to avert around 2 to 3 million deaths each year, globally.

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In an interaction with Rashmi Mabiyan of ETHealthworld, [Dr Davinder Gill](#), Chief Executive Officer, **Hilleman Laboratories**, shares his views about the progress made by India in vaccine preventable diseases, role of immunisation programmes and its challenges and the innovations at Hilleman Labs.

Q. What are your views on acceleration of immunization programme and its impact?

Dr Davinder Gill: The National immunization programme in India has made significant progress in last few years. The coverage of basic vaccines such as Diphtheria, Pertussis, Tetanus (DPT) has registered an impressive growth as a result of the additional sessions held under Mission Indradhanush (MI) and its further scale up across highly vulnerable areas and low-performing districts. The government of India has also introduced several life-saving vaccines like rotavirus vaccine, measles rubella vaccine and pneumococcal conjugate vaccine to the national immunization programme which further strengthens the public health system.

Despite steady progress, an estimated 38% of children failed to receive all basic vaccines in the first year of life in 2016. There are several unique factors limiting vaccination coverage in India. These are large, mobile and isolated populations that are difficult to reach. We also witness low demand from underinformed and misinformed populations who fear side effects and are influenced by anti-vaccination messages.

The healthcare landscape in India has started improving with new innovations and while there are initiatives such as Mission Indradhanush and Ayushman Bharat, there needs to be a bigger push on behalf of the government.

How do you find the global trends in vaccination?

Dr Davinder Gill: When you see global vaccination trends, you see both good news and not so good news. The good news is that we are witnessing the advent of newer and innovative vaccines against emerging epidemics. Today, we have approved vaccines for diseases like dengue, and hopefully soon, for malaria which weren't there 5 years ago. Now there are new technologies for vaccine delivery and vaccine administration.

One of the major challenges we face in India is of misinformation or selective information getting spread on social media. This leads to parents becoming hesitant to vaccinate their child. People should not look at vaccination as an individual right and should view it as a moral obligation to society, as it both safeguards or puts the entire community at the risk of infection. Access to health systems that deliver safe and cost-effective vaccines must be aligned with community awareness around importance of vaccines.

What are the bottlenecks that you find in the delivery of life saving vaccines?

Dr Davinder Gill: Low and middle-income countries (LMICs) like India face the challenge of inefficiencies in vaccine management and delivery, mostly in the use of inadequate logistics and temperature monitoring systems prevalent in vaccine delivery. To achieve a higher immunization rate in the country, it becomes imperative that all the available technologies for vaccine delivery are optimally used to improve efficiency.

With new vaccines being introduced in the immunization programme, we need to ensure that they are effectively delivered.

What are the new technological innovations at Hilleman Laboratories?

Dr Davinder Gill: The current innovations at Hilleman Labs are focused towards addressing gaps that exist in low resource settings. Usually, when a vaccine is stored at room temperature, it is stable only for a few hours or a few days. The thermostable technology created by Hilleman Laboratories enables a vaccine to be stored for many months outside of cold chain. We have applied this technology to our rotavirus vaccine. In India, this can have a huge impact in reaching out to the migrant population and distant areas where proper infrastructure is lacking. Such technologies can help in the ease of delivery and reducing the cost of delivery.

Another important innovation that we are working on is simple-to-administer,

painless micro-array patches which do not require intervention of trained nurses or doctors. For vaccines like inactivated polio vaccines, the micro-needle patch approach helps use a much smaller dose and in turn maximize the amount of vaccine that is available.

Recently, we have collaborated with the Indian Council of Medical Research (ICMR) to develop a vaccine for Shigella, which is a major cause of diarrhoea among children. Currently, there is no approved vaccine in the country for the prevention of shigellosis. Our focus is both on improvement of vaccine delivery using new technology and on new vaccine innovations. In order to make these efforts successful, there are policy innovations, implementation support from the government and from the local agencies that is required.

How has been your journey as a CEO and your contribution to the community?

Dr Davinder Gill: In the last one decade, as a country, we have made a lot of progress in public health with eliminating maternal and tetanus (MNTE), and lesser under-five deaths due to diarrhoea, pulmonary infections and malnutrition. Today there is a greater political will and accountability towards healthcare as compared to when I had started my journey.

We started our journey in 2009, and since then have remained focused towards increasing the awareness for affordable vaccines, improving delivery of vaccines and development of products that could make a difference across low and middle-income countries. So far, the journey has been great.

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