

Vaccine Policy of India: A Comparative study of Polio and Covid 19 Vaccine Policy

Nahid Hasan^{*}
Akash Tawar^{**}

Abstract

The paper has assessed how far the government of India has succeeded in securing the lives of the people by developing immunity against the two contagious diseases, namely Polio and Covid 19. The paper intends to analyse government's vaccine policy for reaching this end. The Paper will review how far the vaccine has immunised the targeted population. It has made a comparative analysis of India's Polio and Covid 19 vaccine policies. It has critically examined the shortcomings of government policy in reaching out the targeted population. The paper has adopted analytical and statistical method using data and diagrams for this purpose.

Keywords: Government of India, Vaccine Policy, Polio Vaccine Policy, Covid 19 Vaccine Policy, Contagious Diseases, Immunization Policy

Introduction

Vaccine is not the cure of any disease, but it could stop the spread of most of the contagious diseases. History has established this fact. Because. Its prices are also remained under check by the government of the day. Either it is distributed by an international agency on the ground of any health need, which could affect the society in large both national and international.

India has made good infrastructure to produce pharmaceuticals and vaccines after independence. Even before independence vaccination attempt and production started in India. Smallpox is known to be the first infectious disease in the known history, where vaccination attempt was started. A three-year-old child "Anna Dusthall" was the first in the recorded history of India who received smallpox vaccine which was

* Assistant Professor, Department of Political Science, Guru Ghasidas Vishwavidyalaya, (A Central University), Bilaspur, Chhattisgarh, India. Email: hasannahid282@gmail.com

** Assistant Professor, Department of Political Science, Guru Ghasidas Vishwavidyalaya, (A Central University), Bilaspur, Chhattisgarh, India. Email: hasannahid282@gmail.com

supposed to be reached in India in 1802¹. During that time vaccine in India was imported mainly from Great Britain. But the high transportation cost and increasing demand of vaccine in India led to produce vaccines indigenously. Initial research efforts started in Bombay (Mumbai) in 1832.

Early smallpox vaccine was collected from the lymph from cows after vaccinating them from cowpox vaccine². During that time, India under British Government invited Dr. Haffkine to conduct vaccine trials in Agra and got success in controlling the disease³. Since 1904, attempts were also made to develop typhoid vaccine. The trials were conducted between 1904-1908⁴. In twentieth century, vaccines for smallpox, cholera, plague, typhoid were available in the country. The centre was Haffkine Institute for plague, small pox vaccine centre was established in Shillong⁵ and many others.

After independence tuberculosis became the major threat of health. Its vaccine BCG, producing centre was established at Guindy, Madras (Chennai) at King institute. Later on, BCG vaccine producing centre was extended at almost all the states of India⁶. After 1977 after liberating from smallpox, India launched National Immunization Programme Expanded Programme of Immunization (EPI) in 1978. It included BCG, OPV, DPT typhoid-paratyphoid vaccines⁷.

Polio vaccine first came in 1952 when Dr. Jonas Salk first made its effective vaccine⁸. Although the disease existed as long as human civilization. It results to spinal and respiratory paralysis. The disease was incurable before its vaccine. Polio's first vaccine is given through injection of inactivated or destroyed virus, which was developed by Dr. Jonas Salk in 1955⁹. Its second vaccine is weakened or thin strain of polio

¹ Bhattacharya, S et.all (2006), "Fractured states: Smallpox, public health and vaccination policy in British India, 1800-1947", Orient Longman, Hyderabad.

² Laharia, Chandrakant (2014), "A brief history of Vaccines and vaccination in India", *Indian J Med Res*, 491-511: 491

³ *Ibid*

⁴ Cockburn WC. Large-scale field trials of active immunizing agents, with special reference to vaccination against pertussis (1955). *Bull World Health Organ*, 13, 395-407.

⁵ *Ibid*

⁶ Mahler HT and Ali P, Mohammad, (1955) "Review of mass B.C.G project in India", *Indian J Tuberc*, 2, 198-16.

⁷ Government of India, (2005), "Multi Year Strategic Plan for Universal Immunization Program in India (2005-2010)", New Delhi, Ministry of Health and Family Welfare.

⁸ Walsh, Fergus (2012), "How India has had remarkable success in polio fight", Bbc news.

⁹ *Ibid*

virus, which is given in drops. It is this this vaccine which is actually used to cure polio. It is developed by Dr. Albert Sabin in 1961¹⁰. Rotary international in 1985 took responsibility to eradicate this deadly disease by launching the Polio Plus programme. WHO set the target to eradicate the polio virus in 1988 worldwide by 2000¹¹. With this effort the number of polio cases reduced drastically. It eliminated to almost 99%. But the remaining 1% stayed there for decades.

India has also done a good job in eradicating the polio. Although the country faced many challenges in achieving this end. Few notable challenges were: high population density, high birth rate, poor sanitation facility, prevalent disease of diarrhea, reluctance of some section of people to take vaccine (especially Muslim population in few pockets). According to “Nicole Deutsch”, who is head of polio eradication programme in India for “UNICEF”, “Despite these obstacles, India proved to the world how to conquer this disease: through the strong commitment of the government, seamless partnership comprising the government , Rotary clubs, WHO and UNICEF, and above all the tireless hard work of millions of frontline workers -vaccinators, social mobilisers and community and health workers-who continue to implement innovative strategies to rod India of Polio”

In a diverse country like India, which has a large and diverse population, micro action plan was needed to reach out the people. In many area people did not want to take the vaccine due to fear of its side effect. “UNICEF “set up “Social Mobilisation Network” in North Uttar Pradesh. “Because the people there refused to immunize their children. In districts here people got scared due to the repeated round of polio immunization. There was also rumorthere that polio vaccine could result to impotency.

Steps taken by the government of India to immunize the people from Polio

Government deputed community mobilizers who started campaigning about the need of hand -washing. It was helpful to cure diarrhoea. As diarrhoea was preventing to reach out the benefit of vaccine to targeted people. Community mobilizers treated diarrhoea with zinc and oral rehydration therapy. Community workers mobilized people about hygiene, sanitation, exclusive breast feeding for six months, routine immunization for the polio eradication. These steps paid off.

Government of India launched National Immunization Day (NID) which is known as Pulse Polio immunization programme in 1995. It is conducted two times in each year. Apart from it at least two rounds of sub national immunization day were conducted for several years in high risk

¹⁰Ibid

¹¹WHO

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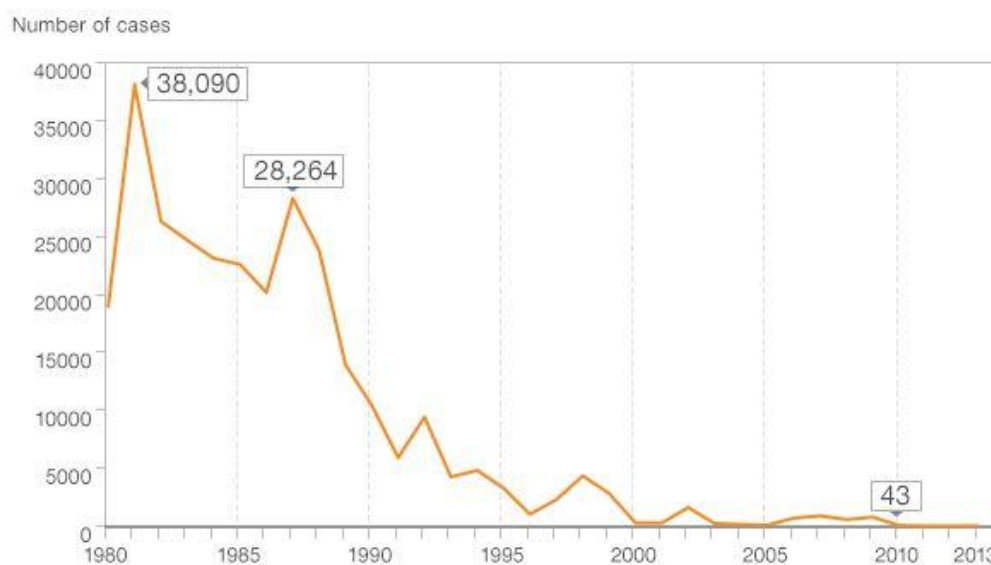
zone areas. In National Immunization Day, children over the age group of 0-5 years were given polio drops. Around 170 million children were vaccinated during each National Immunization Day. 77 million children were immunized in each sub national immunization day¹².

Government of India took steps to immunize marginalized and mobile people. Community workers went to bus stations, construction sites. They went on trains, motorcycles. They also went on foot to immunize children in the remotest area of the country. It also took help of religious leaders to reach out Muslim communities.

Government took sample of sewage in high-risk areas. Community workers were held personally accountable during vaccination campaigns. Strict actions were taken against him if any laxity was found in vaccine supply. The last case of polio was reported here in 2011 in East West Bengal, when Rukhsar contracted the disease¹³. Government of India conducted two National Immunization days (NIDs) in 2011. In each of the NID, almost 2.5 million polio vaccinators, vaccinated near about 172 million children under the age of five in India's 35 states and union territories.

In 2011, India conducted seven small Subnational Immunization Days. In this immunization nearly two million community workers conducted massive mobilization campaign in high-risk areas. Finally, India got the certificate of polio free nation in 2014 along with the entire Southeast Asia by the WHO. March 2021 marked the ten years since the last case of Polio found in India.

Eradicating polio: Cases in India since 1980



Source: World Health Organisation

¹² <https://main.mohfw.gov.in> > Pulse Polio Programme

¹³ <https://www.historyofvaccines.org> > content > blog > ru...

Steps taken by the government of India to immunize the people from COVID 19

The first COVID case found in dec 2019 in China and very soon it captured the world. In India it was first found on 16 January 2020¹⁴. It was declared a public emergency in January 2020 and a pandemic in March 2020. India. India started planning of vaccination based on scientific evidence and with global efforts. Government of India started with six key principles:

- Adoption of a universal programme approach
It includes everyone above 18 years of age to vaccinated at all public health hospitals
- Self-reliance
It is based on the government funded technology and funding to develop the vaccines indigenously
- Prioritization of beneficiaries
It is based on WHO guidelines of vaccinating the health and frontline workers first. Next chance was given to those people who were more vulnerable due to age and other complexities and diseases. Next come to all the adults above the age of 18.
- Development of a digital interface
It involved online registration for vaccination, online certificate generation after vaccination, and online tracking of eligible beneficiaries
- One Earth, One health approach
It includes sharing the expertise, knowledge, recourse globally to all.
- Consultative and collaborating approach

It included all stakeholders to engage from the very beginning, who could benefit the vaccination drive¹⁵.

Shortcomings of India's Covid 19 vaccine Policy

Government of India launched its Covid vaccine policy in January 2021, when a 34-year-old sanitation worker at All India Institute of Medical Science (AIIMS) injected the covid-19 vaccine. India's second Covid

¹⁴“Covid 19 Vaccine launched in India India is well prepared for the largest vaccine drive to combat covid 19”, Unicef for every child India.

¹⁵“the World largest vaccination drive, “<https://www.mohfw.gov.in> > pdf >.. > COVIDVaccinationBo..

wave started in mid-march 2021 and aggregated in April 2021¹⁶. The deadly second corona virus infection caused large number of human fatalities. It caused the mounting pressure on India's crumbling health infrastructure to deal with the covid. It led people gasping for breath and hospitals and pharmacist showed scarcity of oxygen and medicine. The gasping people were turned away by the already overburdened hospitals. Daily recorded cases were 400, 000 on 1st May 2021 and highest daily cases were reported to be 414, 188 on 6 May 2021¹⁷. It was the highest single day infections which is recorded globally. The corona virus death at that also exceeded to 4,000 in a single day.

The second surge of corona virus infections were also due to the overconfidence of people and the government, as they returned smoothly with their daily business of life and work. Children were back to schools; large gatherings were seen at festivals and electioneering. The surge also came from the fast transmission of new corona variants, B.1.1.7 and B.1.617, airborne transmission and asymptomatic infections.

The second wave of corona virus was also fueled by the inappropriate and lesser immunization. India faced scarcity of covid-vaccine supply during the second wave. It also aggravated the covid deaths. India made three main errors in her Covid vaccine policy. First, it stucked to its two indigenous vaccine and did not diversify its vaccine supply. Government of India relied on the two vaccines, which according to them, not only sufficient for the domestic use but also for the export to the other countries.

Second, India did not make "at- risk" (risk and return) investment at time research and development for vaccine production at time. So that it lacked the production of covid vaccine. At the same time, United State, United Kingdom, Germany spent on covid research and development and produced covid-19 vaccine rapidly.

Third, India did not place its order at time to purchase vaccine. It placed its order in January 2021. By that time exporters were already committed to sell vaccines to other purchased orders. These factors resulted the acute shortage of covid vaccines during the second wave of corona virus in India. Vaccination rate got halved by 7 April 2021. As a result, India liberalized its vaccine policy from May 1, 2021. It started importing vaccines. 50 percent vaccine was purchased by the government at regulated price and administered to the people by free of cost, while 25

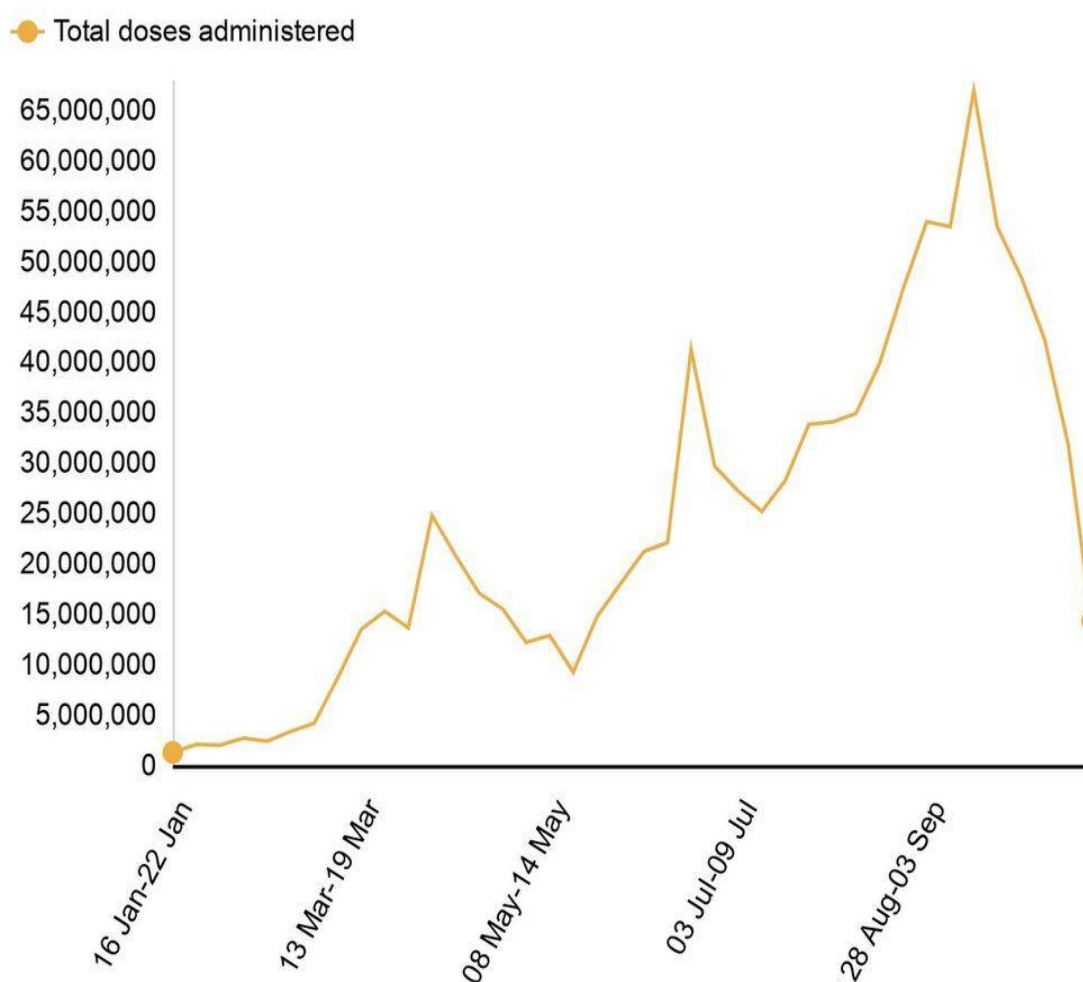
¹⁶ Samarasekera, Udani (2021), "India grapples with second wave of Covid -19", 2(6), *The Lancet*, 1-1.:1.

¹⁷ Singh, Vipin Bahadur (2021), "The human costs of COVID-19 policy failures in India", *Nature Human Behaviour*, 810-811: 810.

percent each were purchased on high market price by the state governments and private hospitals¹⁸.

By the June government changed its covid vaccine purchasing policy amid Supreme Court's intervention of Ar. 21 of the Constitution of India, which ensures right to life to its citizens. High cost of covid vaccines was threatening to it which ensures right to life. So, the government revised its earlier 50:25:25 policy of vaccine supply. From 21st June onwards, government of India adopted 75:25 policy of vaccine procurement. It is 75 percent of its vaccine will be purchased by the govt and procured free of cost, while the remaining 25 percent procurement were left for the private hospitals to purchase and procured with its cost¹⁹.

Total vaccine doses administered in India



Source: CoWin dashboard, data to 17 Oct

BBC

¹⁸Rajkumar, R (2021), "India's arbitrary and irrational vaccine policy spells trouble", *East Asia Forum*, 1-5:2,3.

¹⁹Ibid

Conclusion

After the passing of the second wave of corona virus and the with the change of policy, India now has successfully administered more than one billion covid vaccine to the people. It has administered its 30% (291million) of adult population and 707 million people had got their first dose²⁰. With this target India became the second country after China who has crossed the I billion covid immunization. But still 30% percent of its people is not vaccinated. Vaccination of Children has yet not started. These are the issues which the government has to resolve after the second wave debacle. When we compare the covid immunization to the earlier polio immunization we see polio vaccine had only one targeted group (children) while covid immunization requires more than one targeted group (old, adult, children). So, the challenges are also many. Apart from it, polio immunization included multiple tire immunization efforts led to the final roll out of the disease from the country. It was done with the combined collaboration of international agency national government, efforts of the local dedicated community workers and the decentralized policy of the government to take the vaccines to the mobile peoples, to truck drivers, bus stations, construction sites, minority community, which actually paid. When we compare this with the covid immunization these concrete steps are lacking till date....

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