The Other Side of India's Polio Eradication Story

- Vratesh Srivastava (November 18th, 2023)

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Summary

Following the 1988 World Health Assembly declaration to eradicate polio by the year 2000, to which India was a signatory, India ran intensive pulse polio immunization campaigns since 1995 [1]. After 19 years, in 2014, polio was declared officially eradicated in India. India was formally acknowledged by WHO as being free of polio [2].

However, an in depth analysis of the India's polio eradication campaign reveals facts that contradict this narrative and call the ethics of the entire vaccination campaign into question. Some of the facts are highlighted below

- 1. Using a consistent definition, there's no evidence polio was eradicated: Using a consistent definition of a polio case, there is no evidence that polio got eradicated. In fact, if one were to go by the traditional way where all acute flaccid paralysis cases used to classify as polio, polio cases actually skyrocketed as the vaccination programs intensified. However, India opted for WHO's criteria for diagnosing polio since 1997, which led to a change in definition of polio and consequently a drastic drop in cases of polio, despite a sustained increase in cases of acute flaccid paralysis which pre-1997 used to be classified as polio. [1, 3, 4]
- 2. The entire immunization programme was an exercise in eliminating wild polio viruses from stool specimens, not reducing incidence of acute flaccid paralysis: While the mainstream narrative indicated that the vaccine was reducing incidence of paralysis from polio, Dr. T. Jacob John, chairman of the polio eradication committee, made it clear that the aim was to only eradicate wild viruses from stool specimens, not the incidence of acute flaccid paralysis. [5]
- 3. **Deliberate Violation of informed consent**: It was known by members of the polio eradication committee that the vaccine itself can cause polio a condition called VAPP or vaccine associated paralytic poliomyelitis. This known side effect was deliberately hidden from the public and parents of the vaccinated children, with full knowledge of WHO and UNICEF. Worse, polio induced by the vaccine was paradoxically classified as non-polio. [6, 7, 1, 8, 9]
- 4. **Coercion to vaccinate:**There were reports of coercion where families were threatened with power cuts and no ration if they refused to vaccinate their child. **[7]**
- 5. Several red flags about vaccine failure: A disproportionately high number of polio cases were vaccinated. There was no effort made to study in detail the cause of vaccine failure and vaccine induced polio [7, 4, 10]. A study by Dr. Pulliyel et al.actually indicated a strong association between rise in cases of acute flaccid paralysis and the polio campaign. [11]. Similar observation was made in another study of 9 AFP cases, where children had received upto an astonishing 25 doses. [12]
- 6. Indiscriminate repeated vaccination with no safety studies: While the original dosage recommendation for the polio vaccine had been 3 doses, in India's case it steadily increased to 7 and then to theoretically 10 doses [13, 9]. It was reported that 70 million children received 10 doses a year [14]. Many children received upto 25 doses, prompting concerns of safety from the Indian Medical Association which was ignored by the government. [15]
- 7. Poor surveillance of side effects implies that there was likely an incalculable number of serious adverse events: India has had poor post marketing surveillance of adverse events and it is difficult to gauge the entire spectrum of adverse events from vaccinations [17]. As recently as 2018, a former member of NTAGI (National Technical Advisory Group on Immunization)

acknowledged that AEFI (Adverse Events Following Immunization) in India was less than adequate and adverse events underreported as the AEFI committee sat only 4 times a year and analyzed 100 cases at a time, a very small number given the thousands of adverse events reported annually [16]. There were reports of children getting brain stroke, going blind and even dying post the vaccination. [18, 19, 20]

8. Lack of justice for vaccine victims: While adverse effects like vaccine induced polio were deliberately hidden, there was no compensation scheme in place. In matters where victims went to court and were able to successfully fight for compensation, the settlement in some of such cases took 10 to 25 years. [21, 22]

In short, what actually happened on the ground seems to completely contradict what has been disseminated and publicized through mainstream media. One can argue with the above facts that the entire polio vaccination programme is mired in controversy and unscientific principles that actually led to incalculable suffering and misery.

1. Using a consistent definition, there's no evidence polio was eradicated

1.1 Comparison of Polio Incidence using old and new definitions

Using a consistent definition of a polio case, there is no evidence that polio got eradicated. In fact, if one were to go by the traditional way where all acute flaccid paralysis cases were classified as polio, polio cases actually skyrocketed as the vaccination programs intensified. However, India opted for WHO's criteria for diagnosing polio since 1997, which led to a change in definition of polio and consequently a drastic drop in cases of polio, despite a sustained increase in cases of acute flaccid paralysis (AFP) which pre-1997 used to be classified as polio. [1, 3, 4]

"**Upto 1996 all reported cases of acute flaccid paralysis (AFP) were labelled as polio cases**" - Dr. Yash Paul, former member of India's Polio Eradication Committee [1]

"All polio cases reported before 1997 were confirmed by attending physicians with no standard case definition." - CDC [23]

As can be seen in the chart below, polio was actually on the decline before the introduction of pulse polio immunizations in 1995. This decline correlated well with the decline in use of DDT (*details in section 1.3*). Subsequently, the recorded cases of acute flaccid paralysis (or polio per the pre-1997 classification) skyrocketed, a strong signal raising the question if the vaccination programme was responsible for much of this rise. [26 27, 1, 28, 29]



Polio Cases in India - Old Definition and New Definition

Based on published research, it can be argued that many of the case of acute flaccid paralysis were triggered by the vaccine itself. Oral Polio vaccine can trigger polio itself (called vaccine associated paralytic poliomyelitis or VAPP) [3] and other so called "non-polio acute flaccid paralysis" cases such as Guillain-Barré syndrome (GBS), transverse myelitis and facial paralysis. Supplements 1,2 and 3 highlight literature from the early to mid 20th century, primarily before the widespread use of vaccines, about the classification of GBS, transverse myelitis and Bell's palsy as different types of poliomyelitis.

"Molecular characterization of polio virus isolated from paralysis cases of GBS, transverse myelitis and facial paralysis have confirmed the vaccine origin of the strain and demonstrated mutation known to increase neurovirulence. **This suggests that the Sabin vaccine-derived poliovirus strains could also trigger such diseases**" - Journal of Indian Pediatrics (2006) [24]

""The evidence favors acceptance of a **causal relation between OPV (oral polio vaccine) and GBS.**" - Vaccine Safety Committee, Institute of Medicine, US [25]

Pre-1997, 2 things that stand out as far as incidence of poliomyelitis is concerned are - (1) intramuscular injections and (2) DDT consumption

1.2 Pre-1997, 67% of poliomyelitis cases were triggered by intramuscular injections

Going through the literature of poliomyelitis outbreaks before the change in definition, it is clear that close to 67% of the cases were triggered by intramuscular injections. Since, 1997, it appears that many such cases were labeled "non-polio acute flaccid paralysis" (NPAFP) under various headings such as *"traumatic neuritis", "sciatic nerve mononeuropathy", "Post injection Palsy" etc.*, especially where stool specimens were unavailable, inadequate or tested negative.

- "In India, where poliovirus infection is still widespread, our findings suggest that three-quarters of cases of paralytic poliomyelitis in the past decade were caused or made more severe by unnecessary injections." (Provocation Paralysis writeup in Lancet, 1993)[39]
- "Provocation of poliomyelitis occurred in 66% of children and usually followed intragluteal injections associated with treatment of non-specific fevers" (study of over 12,800 cases of polio in Pondicherry, India, 1989) [40]
- "Two thirds of the affected children had received injections in one or both sides of the gluteal region." (1987 study of children admitted to a hospital in Chennai, Tamil Nadu) [41]
- "all those with paralysis gave a history of injections into the gluteal region or thigh during the pre-paralyticstage." (a 1993 study from Rohtak, Haryana) [42]
- "Intramuscular injection was given in 70% (of cases) within one month of onset of paralysis" (1989 study from Chennai, Tamil Nadu) [43]
- 5 out of 7 children with paralytic poliomyelitis in this study about outbreak of polio in an orphanage in Delhi in 1992, suffered the condition following DPT injections. [44]
- "Onset of paralysis was noticed in 73.5% of the children following administration of intramuscular injection on the same limb" (1994 study of poliomyelitis study in Andhra Pradesh) [45]
- "60% had a history of intramuscular injections preceding paralysis" (1991 study of 37 cases in Haryana) [46]

• "The relative risk of giving injection during the prodromal stage in provoking paralysis was found to be 18, 10 and 13, by matched and triplet analysis respectively" (1994 field study from Chennai, India) [47]

Since 1997, below are snippets from journals/writeups that indicate that paralysis following injections were classified as non-polio AFP

- 27 of the 45 AFP cases investigated in Chhatisgarh per this study in 2003 were classified as "post injection palsy [48]
- Per this study in 2003 from New Delhi 12-14% of cases of AFP were "traumatic sciatic neuritis following intra gluteal injections" [49]
- Per this 1998 writeup "*post-injection sciatic nerve mononeuropathies*" was one of the 3 most common causes of Acute Flaccid Paralysis [50]
- Per this 2005 writeup "It is essential that cases of polio are not misdiagnosed as traumatic neuritis" [51]

1.3 The DDT polio connection

"Some evidence exists that *pesticides* can cause deformities of limbs and visual disabilities in humans even when taken in low doses". [68]

References to the connection and possible causal association between pesticides like DDT and polio can be found here[62] and here [61]

"in the works of Ralph Scobey, MD,".... "from ancient times to the early 20th century, the symptoms and physiology of paralytic poliomyelitis were often described as the results of poisoning. It wasn't until the mid-19th century that the word "poliomyelitis" became the designation for the paralytic effects of both severe poisoning and polio-like diseases assumed to be germ-caused"

"McCormick , Scobey, and Goddard, in detailed studies, have all pointed out that factors other than infective agents are certainly involved in the etiology of polio, varying from nutritional defects to a variety of poisons which affect the nervous system." [105]

With reference to India, it is noticeable that while DDT consumption was steady in the 70s and 80s, the use of DDT in agriculture peaked at 4,700 tones in 1978 and then declined to 0 in the 90s, following ban of its use on agriculture in 1989. Overall use of DDT, which includes indoor spraying, declined from 12,500 tonnes in 1980 to 4,400 tonnes in 1996. It is important to note that the major environmental impact of DDT is in agriculture. It is estimated that DDT spraying has only 0.04% of the environmental impact compared to use of DDT in agriculture. This accentuates the ban of DDT in agriculture in 1989 and a plausible hypothesis can be made that ban of DDT in agriculture accelerated the decline of polio incidence in India in the early 1990s. The decline in polio cases in India from 1980 to 1996 of about 82% correlates well with overall decline of about 65% in DDT usage but more so with the decline in agricultural use (from a peak of 4,700 tons in 1978 to 0 in 1996). [63, 64, 65, 66, 67]

Type of	1960	1966	1970	1975	1976	1977	1978	1979	1980	1984	1994**	1996**
use												
Public	21.0	2.7	6.2	7.3	7.3	9.0	6.8	6.5	8.5	12.0	4.3	4.4
health												
Agriculture	0.6	2.4	2.4	2.5	1.3	2.5	4.7	4.2	4.0	2.0	0	0

DDT Consumption in India (**1994 and 1996 are production numbers, however it's reasonable to infer that India's consumption was close to its production numbers as by 1994 India was producing almost all the pesticides it consumed. DDT consumption in agriculture was banned in 1989)

2. Polio eradication was not about reducing incidence of acute flaccid paralysis

2.1 The inadequacy of virological tests in diagnosing poliomyelitis

While the mainstream narrative indicated that the vaccine was reducing incidence of paralysis from polio, Dr. T. Jacob John, chairman of the polio eradication committee, made it clear that the aim was to only eradicate wild viruses from stool specimens, not the incidence of acute flaccid paralysis.

""Indeed it is not AFP (acute flaccid paralysis) that is under eradication, but wild polioviruses. Thus the criterion of eradication is the absence of wild polioviruses in stools" - Dr. T. Jacob John, Former Chaiman, Polio Eradication Committee, Indian Academy of Pediatrics [30]

What should one make of a statement like the above? There are tens of thousands of acute flaccid paralysis cases every year, but just because wild polioviruses are not detected in stools, such cases are discarded as non-polio? This was not the case pre-1997. Clinical diagnosis took precedence over virological examination and AFP cases were classified as polio per Dr. Yash Paul.

Moreover, it's important to note that virological examination is alone does not negate a clinical diagnosis. This observation was made in the 4th international poliomyelitis conference in 1958. [31]

"Failure to isolate the virus does not necessarily negate a clinical diagnosis" - Dr. Edwin Lennette as quoted in his paper "Problems of Viral Diagnostic Laboratory with Respect to Poliomyelitis"

"Failure to isolate polio virus from a patient exhibiting a clinical syndrome compatible with poliomyelitis does not rule out the diagnosis" Dr. Albert Sabin, credited as inventor of the oral polio vaccine, as quoted from his paper "Discussion - Isolation of Viruses"

Below are a few more examples that highlight why simply testing stool specimens can significantly understate case counts of paralytic polio.

- Per a study in Texas, only 26% of suspected cases were confirmed polio cases through laboratory stool test. Historically, clinical diagnosis would've meant all such cases be diagnosed as polio, but with the new definition "confirming diagnosis", only 26% of such cases would count as polio. [32]
- Only 14.8% of diagnosed polio or polio like illnesses were laboratory confirmed as polio per a study in Washington state in 1956 [33]
- Only 39 out of 458 cases were confirmed polio cases in 1957 per a Michigan study in 1957. [34]
- In Nepal, the AFP (acute flaccid paralysis) rate went up more than 3 fold in 1999 compared to 1998, still the poliomyelities cases dropped by 40%. How was this achieved? Simply by increasing and testing the number of stool specimens. In 1999, stool specimens of 79% of the AFP cases were collected, while in 1998 only 35% of the stool specimens were collected. Higher the % of stool specimens collected, lower the number of laboratory confirmed cases of poliomyelitis. [**35**]
- In the paper titled "Problems of the Viral Diagnostic Laboratory with Respect to Poliomyelitis" during the 4th International Poliomyelitis Conference in 1958, Dr. Edwin H. Lennette observed that polio viruses were isolated from stool specimens from only 36% of the cases clinically diagnosed as polio. No viruses (polio viruses or other enteroviruses) were detected in 47% of the

specimens. It also observed that a "restricted diagnostic service" was introduced in May 1955, a month after Salk's vaccine was licensed **[31]**

2.2 Viruses the sole causative agents of poliomyelitis?

An article in 1937 in the **Journal of the American Osteopathic Association raised skepticism about the virus origin theory of poliomyelitis** (the theory on the basis of which the first polio vaccines of Kolmer and Broie had been made available in 1935) [59]

Snippets:

"Contrary to what is commonly believed, **poliomyelitis is rather infrequent in crowded districts and among children who frequent crowded places** such as schools, churches, theaters, etc."

"Despite the tremendous amount of research aimed at the understanding of the causative factors underlying anterior poliomyelitis, we are today still in a quandary as to the true etiology. **Even the most widely accepted cause has not been universally acknowledged. The virus theory is the basis for most official investigations, but it is subject to much questioning.**"

"Most investigators agree thus far that the agent is a filtrable virus, but **controversy wages as to 2 how the virus enters the human body and why.**"

"The exact manner of the spread of the disease is not known,"

"the disease has spread despite the most rigid isolation."

As Scobey observed in one of his writeups - "There is evidence that poliomyelitis has many causes rather than a single cause" [60]

Based on the evidence presented in this section, the question needs to be asked if viruses are the sole cause of poliomyelitis, or even if they are a necessary condition for the manifestation of disease we know as poliomyelitis. If it is, why was the virus detected in such a small % of stool specimens? Why does poliomyelitis incidence correlate so strongly with DDT usage? Pre-1997, why did provocation by injection comprise almost 67% of the poliomyelitis cases?

It is clear that absence of wild polio viruses from stool specimens does not negate a diagnosis of polio given symptoms of acute flaccid paralysis, but this fact has been ignored and people were misled to believe that eradication of polio is the same as eradication of acute flaccid paralysis, whereas in reality the acute flaccid paralysis cases continue to number in thousands every year. What has been reported from surveillance information is that wild polioviruses are no longer detected in stool specimens. However this mere fact means little given the thousands of AFP cases, which pre-1997 were labelled polio, continue to be reported every year.

3. Violation of informed consent and coercion to vaccinate

Polio is a side effect of the polio vaccine. This condition is called Vaccine Associated Paralytic Poliomyelitis or VAPP. Not just the recipient but close contacts of the recipient are at risk of contracting polio. This fact was deliberately hidden from the masses per Dr. Yash Paul - former member of Polio Eradication Committee of Indian Academy of Pediatrics. [1, 3]

Snippets:

"In a publication entitled 'Together we make India polio free' produced jointly by the Indian Academy of Pediatrics and UNICEF following a workshop held in New Delhi on May 20-21, 2000 on page 14 under Issues and Concerns it was stated: (i) Public discussion of VAPP may cause serious damage to credibility of the polio eradication strategy (ii) In the present scheme **VAPP is discarded as non-polio, although they are the unwanted product of polio programme**, (iii) Epidemiological, clinical and laboratory investigation of VAPP is not carried out. Thus not only information regarding possible harm to a child by OPV was being held back, but facts regarding the occurrence of VAPP were being suppressed."

"It was known that OPV can cause VAPP, but during pulse polio immunization program people were told that OPV is absolutely safe, which was not the truth."

"People were also told through media that OPV is highly effective, although children were developing polio despite taking large number of polio doses"

"No studies regarding the incidence of VAPP cases occurring in India were available"

"This" (VAPP) "was considered a 'price' to be paid for polio eradication and t**he information was guarded as a secret from the public**, because doctors had been advised to restriction the discussion regarding VAPP to academic circles only, so that the pulse polio immunisation may not be affected"

Snippets from the article "Some ethical issues arising from the polio eradication programmes in India" make the below amply clear [6]

- Parents were deliberately not informed of risks of VAPP
- The lie that OPV is safe was deliberate to induce maximum participation
- WHO's guidelines made no mention of informed consent, only a one sided view of "benefits" Snippets:

"advocates for the programme present a one-sided promotion of OPV vaccination"

"This approach is in line with WHO documents about polio which focus on the importance of 'advocacy' or the promotion of vaccination. **They make no mention of informed consent**"

"**Regarding the message that OPV is absolutely safe, we do know that it is not**. However, I will not suggest that the public be alarmed by the very small risk of vaccine associated polio, a price we have accepted to pay for the control and eradication of wild polioviruses"

"Dr. Vipin M. Vashishtha, co-convener of the Polio Eradication Committee of the Indian Academy of Pediatrics added that 'we can dare to disclose the true figures of VAPP only if we have an alternate strategy in place to implement without delay."

"The question to be asked is whether this **sacrifice of parental autonomy**, due to the absence of informed consent, is worth making for the greater good?"

"if it is indeed to be accepted that the benefits of polio eradication outweigh the **withholding of information about the risks of harm**, then, at the very least, an adequate compensation scheme needs to be in place for those that are harmed as a result of the programme. Children (through their parents) should be eligible for compensation if they develop VAPP, as either a recipient or contact case, or if they develop polio and are handicapped or die despite being fully vaccinated"

The below statement is from 2005, in an interaction between 2 members of the polio eradication committee, 10 years after pulse polio immunization started, and decades after OPV was made available in India. What should one make of a question like this coming from a member/former member of the polio eradication committee? Implicit in this question is that parents were knowingly not informed of the risks of VAPP Also read the convoluted response (which acknowledges that parents have not been informed about the risk of VAPP) [36]

"Should the parents be told the truth if a child happens to develop VAPP?"

"In the West, vaccine-associated paralytic poliomyelitis (VAPP) in **vaccine-recipients and contacts** had been identified"

"ethical problem that had been ignored by the silent majority" [9]

The above statement was made by T Jacob John, chairman of polio eradication committee. He uses the term **"silent majority"** clearly implying majority of those involved with designing the polio immunization strategy knew polio vaccines can cause polio, and this known side effect was deliberately hidden i.e they were silent about it.

The illogical WHO backed classification of VAPP as "non-polio" was contested by pediatrician Dr. Yash Paul in 2 separate writeups. [37, 38]

"Many compatible polio cases are <u>wrongly discarded</u> be- cause of two recommendations: (i) <u>vaccine polio</u> <u>viruses de- tected in the stool samples</u> <u>of AFP cases</u>, and (ii) no wild polioviruses detected in the stool samples of AFP case."

- Dr. Yash Paul (March 2004 in the journal "Vaccine")

https://sci-hub.se/https://doi.org/10.1016/j.vaccine.2004.03.063

In an article in Indian Journal of Community Medicine in 2003, Dr. Yash Paul had indicated that 6 of the 8 cases that were vaccine induced polio were incorrectly classified as non-polio/GBS

https://journals.lww.com/ijcm/toc/2006/31030

Despite the glaringly obvious violation of informed consent, what added fuel to the fire was coercion to vaccinate. There were reports of punitive measures being employed against parents who refused vaccination. Per an article in Hindustan Times, power supply was cut and ration withheld after a parent refused vaccination. [3]

"A news item published in Hindustan Times, New Delhi edition dated August 14, 2007 on page 9 under caption 'Refuse polio drops, lose power and ration cards' stated that "sub-divisional magistrate Raghuvir Yadav ordered immediate disconnection of power supply to the house of one Hafiz in Manechha village as well as cancellation of his ration card. Hafiz had refused to let his children be immunized on August 10. The same punishment was meted out to Ayub of Sabarhad. Other people were warned of similar action"

4. Several red flags about vaccine failure ignored?

- A disproportionately high number of polio cases were vaccinated. There was no effort made to study in detail the cause of vaccine failure and vaccine induced polio [7, 4, 10].
- In 2007 to 2009, when coverage of 3 doses or more was 67%-73%, an astonishing 96% of the reported polio cases had received 4 or more doses of the vaccine. In 2007, an unbelievable 85% of the cases had received more than 7 doses.
- A study by Dr. Pulliyel et al.actually indicated a strong association between rise in cases of acute flaccid paralysis and the polio campaign. [11].
- Similar observation was made in another study of 9 AFP cases, where children had received upto an astonishing 25 doses. [12]

Was the below statement by Dr. T. Jacob John, chairman of polio eradication committee, a veiled acknowledgement that the vaccination campaign was a failure?

"All those who ignored ethics and scientific evidence in the past ... have realised their mistakes when it is too late to correct them." [9]

5. Indiscriminate repeated vaccination with no safety studies

While the original dosage recommendation for the polio vaccine had been 3 doses, in India's case it steadily increased to 7 and then to theoretically 10 doses [**13**, **9**]. It was reported that 70 million children received 10 doses a year [**14**]. Many children received upto 25 doses, prompting concerns of safety from the Indian Medical Association which was ignored by the government. [**15**]

"An earlier estimate of **seven doses of OPV may be necessary**, with high coverage to achieve eradication." - Study, ICMR centre of virology

"If the question is whether wild viruses can be eradicated by the tactical use of OPV, the answer is 'yes'. To achieve that, **near 100 per cent coverage with an average of 10 doses per child will be required.** Where the vaccination infrastructure is weak, this is best achieved through repeated pulse vaccination campaigns"

It is hard to find any safety studies associated with this recommendation for increased dosage. It appears as if the sole purpose was to boost the efficacy through repeated revaccination, with little knowledge of unintended consequences.

6. An incalculable number of serious adverse events? Justice elusive for vaccine victims?

India has had poor post marketing surveillance of adverse events and it is difficult to gauge the entire spectrum of adverse events from vaccinations [**17**]. As recently as 2018, a former member of NTAGI acknowledged that AEFI in India was less than adequate and adverse events underreported as the AEFI committee sat only 4 times a year and analyzed 100 cases at a time, a very small number given the thousands of adverse events reported annually [**16**]. There were reports of children getting brain stroke, going blind and even dying post the vaccination. [**18**, **19**, **20**]

Media video report of child losing eyesight following polio vaccination (2019, West Bengal) https://rumble.com/v3wl3c4-child-lost-eyesight-following-polio-vaccination-with-english-subtitles.html

Media video report of a father looking to sell his kidney to raise funds for treatment of his child who suffered brain stroke following polio vaccination (2019, Assam)

https://rumble.com/v3wl3ly-father-looking-to-sell-kidney-to-raise-funds-for-vaccine-injured-childwith.html

Media report of a child suffering acute flaccid paralysis following polio vaccination (2023, Bihar)

https://rumble.com/v3wl427-child-suffering-acute-flaccid-paralysis-following-polio-vaccination-withen.html

While adverse effects like vaccine induced polio were deliberately hidden, there was no compensation scheme in place. In matters where victims went to court and were able to successfully fight for compensation, the settlement of some of such cases took 10 to 25 years. **[21, 22]**

7. Is IPV the answer?

Should oral polio vaccine (OPV) be replaced with the injectable polio vaccine (IPV)? The answer is **No**. For 3 reasons - scientific, financial and ethical.

The scientific case against IPV: There was enough information available in the late 1950s, early 60s itself to suggest that IPV (also called Salk vaccine) was ineffective or had low effectiveness, did not prevent transmission, and could potentially cause paralysis. In a Congressional hearing in the US, it was recommended that oral polio vaccines be administered regardless of number of injectable polio vaccines received. So while the oral polio vaccine was recommended back then due to limitations of the Salk vaccine (IPV), things have come back a full circle, with IPV being recommended due to limitations of the oral polio vaccine! [53, 54, 55] IPV is used in much of the developed world today as it is perceived to be a "safer" vaccine, but again its usage is questionable given its history.

"The extensive use of the Salk inactivated vaccine forpoliomyelitis control during the last few years has not eliminated the danger of paralytic forms of the disease developing in triply vaccinated children and has had no effect on the circulation of the virus among vaccinated children. The limited duration of postvaccinal immunity has made re-immunization necessary after completion of the schedule of three vaccinations with the inactivated vaccine." (Bulletin of the World Health Organization, 1955)

"Once a live, oral vaccine is fully approved, it will be more effective than the killed Salk vaccine. Because of the doubt about the potency and effectiveness of the Salk vaccine in the past, a full course of the new vaccine will undoubtedly be recommended for everyone, regardless of how many Salk shots each individual has had." [52]

It is also important to note that, contrary to popular belief that polio vaccines were introduced in the 1950s, the first polio vaccines made available were in the 1930s. In the mid-1930s, 2 separate polio vaccines were made available in US, one by Dr. Maurice Brodie (killed virus) and the other by Dr. John Kolmer (attenuated). Both vaccines were discontinued following reports of 12 cases of paralysis following vaccination, including 6 deaths. [56, 57, 58]

The ethical case against IPV: Many of the entities recommending IPV are the very same entities who encouraged adoption of OPV and deliberately hid information that can be construed as violation of informed consent. Given the incalculable harm caused by OPV over close to 3 decades, why should these entities be entrusted with anything to do with public health?

The financial case against IPV: The OPV programme between 1994-2012 cost 2.5 billion USD per Dr. Pulliyel. The terrible health tragedy notwithstanding, this sum also represents an enormous waste of the country's financial resources. Would it be justified to continue spending on this programme, given everything highlighted in this paper with regards to the failure of the oral polio vaccination programme, as well as the ethical and scientific case against IPV?

Conclusion

What actually happened on the ground seems to completely contradict what has been disseminated and publicized through mainstream media. One can argue based on the facts presented in this article that the entire polio vaccination programme is mired in controversy and unscientific principles that actually led to incalculable suffering and misery. The only conclusion one can arrive at, therefore is to end all polio vaccination programmes at a minimum, with a roadmap for justice for those harmed by this programme.

Supplement 1 - Bell's palsy and Polio

Mentioned below are quotations from several sources, mostly from the early twentieth century that indicate that Bell's palsy was one of the many clinical manifestations classified as polio.

- In an article in the Journal of American Medical Association in 1941, poliomyelitis was classified into 8 types, of which type VI was labeled as facial paralysis typical of "Bell's Palsy findings".
 [69]
- "Facial paralysis is the most frequent manifestation of acute bulbar-pontine type of poliomyelitis" (pg. 155, A manual on Infantile paralysis by Henry Frauenthal et. al) [70]
- In another book on infantile paralysis, one of the forms of poliomyelitis was classified as "Acute Bulbar paralysis Cranial nerve is attacked, facial nerve is the one most frequently paralyzed, generally on one side". [71]
- "Bell's palsy is another name for facial paralysis" [72]
- "Peripheral facial palsy (Bell's palsy) is the common type of facial paralysis, making up over 80 per cent, of cases. It is of infra-nuclear (peripheral) or nuclear origin.

Etiology. — The typical cases of this disease are due to exposure and so-called "rheumatic influences" with infection. After this the most frequent causes are ear disease, trauma, syphilis and tumors. It may complicate poliomyelitis and encephalitis. Males are oftener affected, and the common age is between twenty and forty. It is more frequent in the winter and in temperate chmates. It is not hereditary, but it may be congenital. A neuropathic tendency predisposes to it. Meningeal syphilis sometimes causes an isolated facial palsy, although it is apt to leave this nerve alone. Facial palsj' may occur in multiple neuritis, when it is often bilateral. Non-typical and accidental cases of peripheral facial palsy are due to injuries, fracture of the petrous bone, or ear disease. Forceps pressure in difficult labor causes some cases. The ordinary cases are mostly due to microbic infections similar to those of "colds" and influenza." [73]

- "Bell's palsy accounts for 72% of facial palsies. Isolated facial palsy usually manifests as Bell's palsy" (*Journal of Medical Case Reports, 2011*) [74]
- "Patients with a Bell's Palsy will present with varying severity of painless unilateral **lower motor neuron (LMN) weakness of the facial muscles"** (Teach Me Series) [75]
- In a study of 614 cases of poliomyelitis admitted to a hospital in Chennai between January 1988 and September 1989, 3.6% of the poliomyelitis cases were diagnosed as isolated facial palsy. About 18.9% presented with cranial nerve paralysis. [76]
- Study of 400 hospital admissions in an outbreak of poliomyelitis in Telangana in 1992, Three children had lower motor neurone type of facial nerve paralysis which fits with the definition of Bell's palsy [77]
- In a polio outbreak in Israel in 1951 -> "In 22 cases the only manifestation of poliomyelitis was facial paralysis." [78]
- In a reported outbreak of poliomyelitis in an orphanage in 1939, Bell's palsy was diagnosed in one of the 6 reported cases, and the diagnosis of poliomyelitis was confirmed with laboratory tests. It was also reported that 2 other cases of Bell's palsy has been observed following acute poliomyelitis infection. Bell's palsy was inferred as a "sequel to polio." [79]

- As polio vaccines were being researched since 1930s, so did the widespread acknowledgement that polio is caused by "viruses", and accordingly, per an article in Illinois medical journal in 1950, a list of 58 diseases that were "*confused*" as poliomyelitis until then was listed, with Bell's Palsy listed as one of them[80]
- In an analysis of polio outbreak in New York in 1935, it was observed that Bell's palsy simulates poliomyelitis and hence during epidemics many patients with Bell's Palsy are "mistakenly" diagnosed as poliomyelitis. Recall that before the vaccines, clinical diagnosis was used to affirm and record a polio case." [81]
- "Of the 446 referred cases of poliomyelitis in a hospital in Chicago over the period 1928-1931, 2 were diagnosed as Bell's palsy." [82]
- "From a number of sources the following diseases are obtained as at times simulating poliomyelitis. In the preparalytic stage the exanthematous diseases, as measles and scarlet fever; tonsillitis, diphtheria, croup, influenza, bronchopneumonia, gastro-enteritis, appendicitis, enterocolitis, typhoid fever, intussusception, ptomaine poisoning, nephritis with uremia, eclampsia, rheumatism, scurvy, dentition, trichinosis, acidosis, tetanus, rabies, the meningitides and meningismus, chorea, lethargic encephalitis, and subarachnoid hemorrhage.

In the **paralytic stage** at times a differential diagnosis must be made from the pseudoparalysis of scurvy, hysteria, injuries and disease of joints, especially tuberculosis, cerebral arterial thrombosis, sinus thrombosis, amaurotic family idiocy, the cerebral palsies of childhood, polioencephalitis, disseminated encephalomyelitis, cerebral tumor, abscess, transverse myelitis, hematomyelia, syringomyelia, Friedreich's ataxia, Pott's disease, traumatic paralysis, spina bifida occulta, progressive muscular atrophy, muscular dystrophy, infectious neuronitis, multiple neuritis, **Bell's palsy**, birth palsy, diphtheritic palatal palsy, and myatonia congenita." [83]

Supplement 2: Transverse Myelitis and Polio

Mentioned below are quotations from several sources, mostly from the early twentieth century that indicate that Transverse Myelitis was one of the many clinical manifestations classified as polio.

- According to this 1914 book titled "A Manual of Infantile Paralysis" *transverse myelitis was described as variation in the usual spinal type of poliomyelitis*" [84]
- Per a writeup in Lancet in 1918, there were 8 classifications of Heine-Medin disease (another name for poliomyelitis) of which Type-3 was transverse myelitis. [85]
- A 1921 writeup by Association for Research in Nervous and Mental Disease quoted **4 reported** cases of polio that presented symptoms of transverse myelitis [86]
- In a writeup in the journal "Neurology" in 1956, there were reports of multiple cases of transverse myelitis that were diagnosed as poliomyelitis or attributed to the "virus of poliomyelitis" [87]
- In a 1949 article that appeared in the 'Bulletin of the Mahoning County Medical Society', transverse myelitis was referred to as an "atypical form of poliomyelitis" [88]
- In a 1952 writeup in the American Journal of Diseases for Children, transverse myelitis was referred to as one of the clinical forms of poliomyelitis [89]
- In a discussion during the 1949 International Poliomyelitis Congress, according to Nielson, *as* many *as* 50 different diseases were called poliomyelitis during epidemics in the Los Angeles area, and symptoms of transverse myelitis simulated polio. [91]
- As polio vaccines were being researched since 1930s, so did the widespread acknowledgement that polio is caused by "viruses", and accordingly, per an article in Illinois medical journal in 1950, a list of 58 diseases that were "confused" as poliomyelitis until then was listed, with **Transverse Myelitis listed as #50 on the list** [80]
- Before 1997, all cases of acute flaccid paralysis (AFP) were classified as polio. While the definition changed in 1997, what's important to note is that **one of the 3 most common causes of AFP per an editorial in Indian Journal of Pediatrics was Transverse Myelitis.** [24, 1]

Supplement 3: Guillain-Barré syndrome (GBS) and polio

Before 1997, all cases of acute flaccid paralysis (AFP) were classified as polio. While the definition changed in 1997, what's important to note is that one of the 3 most common causes of AFP per an editorial in Indian Journal of Pediatrics was Guillain-Barré Syndrome (GBS). [24, 1]

GBS (Guillain-Barré syndrome (GBS) is a documented side effect of the Oral Polio vaccine and accounts for close to half of the AFP (acute flaccid paralysis) cases.

Among the non-polio AFP cases, GBS is the most frequently occurring one. Studies indicate GBS accounts for over half of the AFP cases, and a weighted average of the below 4 studies indicate 45% of the the AFP cases were GBS

- Over 55% AFP were GBS per this study of 53 patients at a tertiary care hospital in Mumbai [91]
- Over 32% of the 187 AFP cases at a tertiary hospital in Delhi were GBS [92]
- Over 41% of 130 AFP cases in a hospital in Rajasthan were GBS [93]
- 78% of the 50 AFP cases in a hospital in Mumbai were GBS [94]

Is GBS a side effect of OPV (oral polio vaccine)? According to US Vaccine Safety commission it is?

"The evidence favors acceptance of a causal relation between OPV (oral polio vaccine) and GBS." -Vaccine Safety Committee, Institute of Medicine, US [25]

According to this study, **94% of the GBS cases had received 3 or more doses of the polio vaccine**, a disproportionately high number given that estimated vaccination coverage was 57%-75%. [95, 4]

Mentioned below are quotations from several sources, mostly from the early twentieth century that indicate that GBS was one of the many clinical manifestations classified as polio.

- "cases of Guillain-Barré's disease are classified as atypical poliomyelitis" (1947, American Journal of Medicine) [96]
- GBS synonyms include: infectious polyneuritis, acute polyneuritis, acute febrile polyneuritis, acute polyneuritis with facial diplegia, radiculoneuritis, motoneuritis, neuronitis, myeloradiculitis, acute infective meningomyeloradiculitis, encephalomyeloradiculitis, acute ascending paralysis, Landry's Paralysis. [97]
- Landry's case = acute poliomyelitis. Autopsy of a case diagnosed with Landry's paralysis revealed acute anterior poliomyelitis. "Wechsler mentions a Landry type of poliomyelitis, and again a syndrome, usually without fever and probably toxico-infectious in character, in which recovery may occur. Jelliffe and White view it as belonging primarily to acute poliomyelitis" [98]
- Per an article that appeared in the Journal "Brain" in 1916, 'Landry' or jump cases (i.e. GBS) was one of the features of poliomyelitis of ascending form "Chapter VI of Batten's monograph deals at length with the clinical features of poliomyelitis. Typically there is flaccid paralysis of one or more limbs. Sometimes this ascends progressively from the legs, and at an irregular pace, eventually affecting all muscles below the neck causing death from respiratory failure. **These are the 'Landry' or jump cases**, in some of whom temporary improvement seems to occur before the illness again progresses" [99]

- Per a book on infantile paralysis (another name for polio), Landry's paralysis (GBS) is the same as infantile paralysis (i.e. poliomyelitis) with a fatal tissue. *"Landry's paralysis was only " infantile paralysis " with a fatal issue; further, that fatal cases of infantile paralysis ran the same clinical course as cases of Landry's paralysis."* [71]
- This 1876 writeup in the Journal of Nervous and Mental Disease establishes equivalence between Landry's paralysis and poliomyelitis.... "the tendency to find a pathological anatomy for a group of symptoms resembling in some respects poliomyelitis has led to relatively frequent descriptions of the lesions of poliomyelitis under the heading of Landry's paralysis." [100]
- Per a book on poliomyelitis (also called Heine-Medin's disease), it's impossible to distinguish between Landry's paralysis (GBS) and Heine-Medin's disease (poliomyelitis). [101]
- "There is a growing feeling among physicians that most of the cases of the so-called Landry's paralysis (GBS) are really poliomyelitis, and this is no doubt true". [102]
- "in recent years the term Landry's paralysis has been applied to cases of poliomyelitis displaying a very acute severe generalized paralysis" [103]
- "Landry's paralysis (or GBS) usually, though not always, is a rapidly form of poliomyelitis ; sometimes it is familial; sometimes it is due Acute to rabies, and occasionally it follows injections of vaccine" [104]

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