



Polio: The Eradication Imbroglia – The Malady & its Remedy. T. Jacob John and Dhanya Dharmapalan. Notion Press, Chennai. 2021. vi + 275 pages. Price: Rs 650.

This book captures the importance of public health policy, among other critical issues, in selecting the more effective vaccine between inactivated polio vaccine (IPV) and oral polio vaccine (OPV), currently available across the world, for establishing vaccine equity in the global population to completely eradicate poliomyelitis that primarily occurs in children less than five years of age. The timeline for disease eradication must be stringent and the policymakers must honour this to save every child from contracting the poliovirus in a strict timeframe; as the authors mention in the book, ‘A goal without a deadline is just a dream’.

The initial goal of polio eradication was set in 1988 to gift a polio-free world to the children of the 21st century. Eradication was to be achieved in 2000. As of 2020, the goal set for 2000 has not yet been achieved, according to the authors. According to G. K. Chesterton, ‘In truth, there are only two kinds of people; those who accept dogma and know it, and those who accept dogma and don’t know it.’ The authors address the importance of paradigm shift in science that lets researchers explore an alternative approach that may not be accepted by a group of influential vaccine investigators, in spite of evidence-based observations, in favour of the not-so-popular approach for disease eradication. The authors point out that instead of repeating the same experiment to get the best results, one might consider a different approach for a better outcome. Thus, the book focuses on changing the current emphasis on using OPV to vaccinate populations across many geographical

regions in the world, as opposed to using IPV for the rapid eradication of poliomyelitis. The key roles of policymakers in the healthcare sector and major organizations such as the World Health Organization (WHO), policy landmarks and major historical events are adequately described in the book. Importantly, the authors include a number of critical real-world observations in support of their notion of using IPV instead of OPV in vaccinating children. First, they use an analogy where typhoid vaccine Ty21A, that is a live attenuated vaccine, like OPV, did well in some regions of the world, such as in the Americas, but performed poorly in the Eastern Mediterranean Region. Rotavirus vaccine did well in the Americas, but not in Africa. Thus, according to the authors, some orally administered live, attenuated vaccines were ineffective in preventing diseases in many geographical areas. Second, the authors challenge the current dogma that supports the use of OPV as the most effective vaccine against poliovirus, delivered orally to children, in contrast to IPV administration through injection. Typically, OPV is preferred over IPV by many clinicians, as they think that the poliovirus enters the body through the mouth by eating food contaminated with faeces and/or food prepared using unhygienic water, hands and kitchen utensils. Thus, the popular dogma is that oral delivery of polio vaccine may be effective in establishing intestinal–mucosal immunity in children, unlike in the case of IPV that is delivered through injection. Third, in favour of their argument, the authors comment that polio was a major problem in the USA despite of all care taken to sustain sanitation and hygiene. Also, they mention that the fastest natural transmission of poliovirus happens primarily in breastfeeding infants, which rules out the possibility of children contracting the poliovirus through faecal contamination. Thus, according to the authors, airborne transmission may be the most likely cause of poliovirus dissemination instead of transmission through the mouth by eating contaminated food, which supports the use of IPV as opposed to OPV for the effective prevention of poliomyelitis in children. Lastly, the authors mention that the manufacturing cost of OPV is higher than IPV, and that number of doses required for OPV is often higher than IPV. Moreover, the effectiveness of OPV is not that high to be preferred over IPV. Taken together, the authors try to address the purpose of this book: To advocate for a paradigm shift from transmission of po-

liovirus through the mouth by eating contaminated food to nostril administration of the virus by airborne transmission. This important paradigm shift will enable the policymakers to accept evidence and reject dogma to adopt the extensive use of IPV as the most effective and safest means of poliovirus administration to children.

The book is clearly written as a science story. It is engaging and well articulated. The authors’ perspectives are supported by real-world evidence and enough emphasis is given to the health policy that might further help eradicate the poliovirus from the world. Considering the fact that it is challenging to come up with a different set of arguments against a popular dogma and let the readers have opposing views, a subtle writing tone would have helped the readers, including policymakers, to read the entire book enthusiastically. In addition, throughout the book, the phrase ‘oral live polio vaccine’ is used instead of ‘live attenuated oral vaccine’. Moreover, it is not indicated why live attenuated polio vaccine requires more doses compared to IPV. Sometimes, 50% efficacy is good enough to be qualified as a vaccine candidate. Thus, disqualification of OPV as a good vaccine candidate due to its less than 100% efficacy may not be appealing to the readers and/or critiques. The Cutter incident in the USA, where IPV administration to children resulted in many deaths due to improper inactivation of the poliovirus, is not mentioned in the book. A few more technical details about the vaccine would have helped in improving the readability, and make the authors’ arguments and logistical inputs in favour of using IPV stronger. Lastly, it is understandable that technical details and comparisons between technology platforms that are used to manufacture IPV and OPV are carefully omitted for easy reading of the book.

Overall the authors achieve predefined goals and purpose of the book. It is relevant in the sense that currently the world is going through the devastating periodic spells of the COVID-19 pandemic, and it is important to strategize the appropriate vaccine policy and its distribution to the remotest corners of the world to achieve herd immunity in the global population. Readers will probably enjoy the comprehensive updates on major vaccine policy organizations and their bodies across the world that will further help them develop confidence about the effectiveness of vaccines against infectious diseases. Importantly, one of the COVID-19 vaccines used currently in India, viz. Covaxin is an inactivated

BOOK REVIEW

viral vaccine like IPV. Thus, the emphasis on IPV in this book can boost the indigenous Covaxin uptake by the Indian population. Also, the book will help readers understand that it is difficult to eradicate any pandemic completely in a reasonable time frame. So, patience is the key to alleviating anxiety among common people. Having said that, appropriate selection of

vaccine type(s), based on real-world evidence, during any ongoing pandemic and its distribution by empowering and influencing policy leaders with science-based evidence as opposed to personal views will facilitate the speedy and timely eradication of any pandemic under a fixed deadline. Thus, in many ways, this book serves its relevance. It is an excellent book to read as

a science story, especially for the vaccine policymakers.

DHURBAJYOTI CHATTOPADHYAY

*Sister Nivedita University,
New Town,
Kolkata 700 156, India
e-mail: vc@snuniv.ac.in*

CURRENT SCIENCE

Display Advertisement Rates

India		Tariff (Rupees)*						
Size	No. of insertions	Inside pages		Inside cover pages		Back cover pages		
		B&W	Colour	B&W	Colour	B&W	Colour	
Full page (H = 23 cm; W = 17.5 cm)	1	22,000	36,000	30,000	48,000	42,000	54,000	
	2	40,000	66,000	56,000	91,000	78,000	1,03,000	
	4	74,000	1,26,000	1,10,000	1,75,000	1,50,000	1,98,000	
	6	1,10,000	1,80,000	1,50,000	2,40,000	2,10,000	2,70,000	
	8	1,32,000	2,24,000	2,02,000	3,18,000	2,76,000	3,60,000	
	10	1,62,000	2,70,000	2,38,000	3,78,000	3,24,000	4,32,000	
	12	2,20,000	3,60,000	3,00,000	4,80,000	4,20,000	5,40,000	
Half page (H = 11 cm; W = 17.5 cm)	1	12,000	22,000	Quarter page (H = 11 cm; W = 8 cm)	No. of insertions	Inside pages		
	2	23,000	40,000			B&W	Colour	
	4	42,000	74,000					
	6	60,000	1,10,000			1	7,000	14,000
	8	72,000	1,32,000			6	35,000	70,000
	10	86,000	1,62,000			12	70,000	1,40,000
	12	1,20,000	2,20,000	One eighth page (H = 5 cm; W = 8 cm)	Rs 4,000 (B&W) and Rs 8,000 (Colour) per insertion			
Other Countries		Tariff (US \$)*						
Size	No. of insertions	Inside pages		Inside cover pages		Back cover pages		
		B&W	Colour	B&W	Colour	B&W	Colour	
Full page (H = 23 cm; W = 17.5 cm)	1	400	800	550	900	750	1200	
	6	2000	4000	2750	4500	3750	6000	
Half page (H = 11 cm; W = 17.5 cm)	1	250	400					
	6	1250	2000					

*25% rebate for Institutional members. Add 5% GST (No. 29AAATC4245R1Z7) to the tariff.

Online advertisement specifications	
Banner Size	Width: 18 cm, Height: 3 cm
Banner links to	Detailed Advertisement (pdf)/URL
Duration of display	15 days (based on the journal's publication schedule)
Tariff* (Rupees)	10,000

*Add 18% GST (No. 29AAATC4245R1Z7) to the tariff.

The payment can be made through **Razorpay** (Add 2% (India)/3% (Other countries) payment processing fee to the tariff) by clicking the below link

For India: <https://rzp.io/l/xQ5rdk0>

For other countries: <https://rzp.io/l/kEAzmJY>

Contact us: Current Science Association, C.V. Raman Avenue, P.B. No. 8001, Bengaluru 560 080.
E-mail: csc@ias.ac.in
Phone no.: 080-2266 1265

Last date for receiving advertising material: Ten days before the scheduled date of publication.

[The jurisdiction for all disputes concerning submitted articles, published material, advertisement, subscription and sale will be at courts/tribunals situated in Bengaluru city only.]