

## The Cutter Incident: How America's First Polio Vaccine Led to a Growing Vaccine Crisis

Paul A Offit

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In April 1955 more than 200 000 children in five Western and mid-Western USA states received a polio vaccine in which the process of inactivating the live virus proved to be defective. Within days there were reports of paralysis and within a month the first mass vaccination programme against polio had to be abandoned. Subsequent investigations revealed that the vaccine, manufactured by the California-based family firm of Cutter Laboratories, had caused 40 000 cases of polio, leaving 200 children with varying degrees of paralysis and killing 10.

Paul Offit, paediatrician and prominent advocate of vaccination, sets the 'Cutter incident' in the context of the struggle of medical science against polio and other infectious diseases over the course of the 20th century. He reminds us that, within a decade of Karl Landsteiner's identification of the polio virus in 1908, an epidemic in New York killed 2400 people (mostly children) and left thousands more with a life-long disability. In the 1950s, summer outbreaks in the USA caused tens of thousands of cases, leaving hundreds paralysed or dead. 'Second only to the atomic bomb', polio was 'the thing that Americans feared the most'.

Offit provides a gripping account of how the 'March of Dimes', inspired in part by President Franklin D Roosevelt's personal experience of polio, raised funds for research and focused national attention on the disease. He profiles leading figures, notably Jonas Salk and Albert Sabin—brilliant, egotistical and flawed characters—pioneers in vaccine development and as scientific celebrities, and notorious for their bitter personal rivalry.

Offit offers a balanced judgement on both the Cutter incident and on the Salk and Sabin vaccines. Reviewing failures in the manufacturing and inspection processes, he exonerates Salk from blame and concludes that 'the federal government, through its vaccine regulatory agency . . . was in the best position to avoid the Cutter tragedy'. Three larger companies produced safe polio vaccines according to Salk's protocol for inactivating the virus with formaldehyde. The lack of experience and expertise at Cutter Laboratories, undetected by the inspectors, caused the disaster.

While acknowledging Salk's mean-spiritedness towards colleagues, Offit believes that in denying him a Nobel prize, history has dealt harshly with a man who was 'the first to do many things' that have contributed to the virtual eradication of polio in the USA. The Cutter incident led to the replacement of Salk's formaldehyde-treated vaccine with

Sabin's attenuated strain. Though Sabin's vaccine had the advantages of being administered orally and of fostering wider 'contact immunity', it could also be re-activated by passage through the gut, resulting in occasional cases of polio (still causing paralysis in six to eight children every year in the 1980s and 1990s, when a modified Salk vaccine was re-introduced). As Offit observes, 'ironically, the Cutter incident—by creating the perception among scientists and the public that Salk's vaccine was dangerous—led in part to the development of a polio vaccine that was more dangerous'.

The Cutter incident had an ambivalent legacy. On the one hand, it led to the effective federal regulation of vaccines, which today enjoy a record of safety 'unmatched by any other medical product'. On the other hand, the court ruling that Cutter was liable to pay compensation to those damaged by its polio vaccine—even though it was not found to be negligent in its production—opened the floodgates to a wave of litigation. As a result, 'vaccines were among the first medical products almost eliminated by lawsuits'. Indeed, the National Vaccine Injury Compensation Program was introduced in 1986 to protect vaccine manufacturers from litigation on a scale that threatened the continuing production of vaccines. Still, many companies have opted out of this low-profit, high-risk field, leaving only a handful of firms to meet a growing demand (resulting in recent shortages of flu and other vaccines).

The contemporary climate of risk aversion and predatory litigation deters the introduction of new vaccines and discourages innovation in a field which boasts some of the most impressive achievements of modern medicine. To protect vaccine development—and ultimately public health—Offit proposes that the option of suing vaccine manufacturers should be stopped and that compensation should only be available through the official programme.

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## Spirituality and the Healthy Mind: Science, Therapy and the Need for Personal Meaning

Marc Galanter

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Marc Galanter has turned professional experience, clinical acumen and erudite scholarship into a fine and timely book.

Director of Alcoholism and Substance Abuse at New York University Medical Center, Professor Galanter's research interests have also included the extensive study of cultic groups. Regretting that mainstream psychiatrists

have so far been reluctant to consider spirituality-oriented healing for their patients, his cautious but well-researched thesis is that, although biomedically-based psychiatry and spirituality involve two different perspectives, they might not be incompatible.

He begins with the question, 'What is spirituality?' We are first told, 'There is no definition. It is a way of life'. Nevertheless, the word consistently evokes deep-seated personal experiences with universal relevance and appeal. Spirituality is described as central to psychological well being, providing both energy and direction. Spiritual awareness can therefore help a person discover not only a sense of meaning and purpose in life, but also a healthy sense of belonging, orientating us when seeking to define and adhere to our values.

Another theme is that, 'Spirituality can be experienced from either a secular or religious standpoint'. This short-circuits another factor inhibiting many from engaging with the subject. Secular spirituality is no oxymoron. It is a reality for a high percentage of patients, surveys of whom reveal its central role in preventing and healing disease, also in enduring both distress and disability.

All doctors should know about this, and Galanter has done us a service in providing such a sane and sensible guide. We are treated to a critical discussion of cults, including problem areas, also of Alcoholics Anonymous and the spirituality of the 12-step method of recovery from addiction. There is thought-provoking material on Christian psychiatry, spirituality in Indian faith traditions and in Islam, on hospital chaplaincy, on alternative (complementary) medicine and on meditation. This is a rich feast, not always

entirely digestible due to its transatlantic bias, but readable enough to be satisfying.

Galanter respects the intelligence of his readers. The most preachy he gets is to suggest in his final chapter that, 'Mental health professionals would do well to attend to individual people as wholes over a lifetime . . . to see if they can be helped to an adaptation that carries meaning and value for them'. This echoes advice I received as a trainee in the eighties, and earlier as a medical student. The person-centred, holistic approach he advocates has always served me well. Psychological healing involves more than the relief of symptoms. It fosters improved emotional resilience and equanimity, thereby resulting in personal growth.

John Swinton refers to spirituality as 'the forgotten dimension' of mental health care. Like him, Marc Galanter has reminded us that we must not neglect this aspect in aiming towards healthy minds: both for our patients and, arguably, for ourselves. Their books both offer us reasoned and reasonable guidance for our effort. They provide cause, at personal and collective levels, to renew our search for sanity . . . and to do so with hope.

*Competing interests* Larry Culliford is on the executive committee of the Royal College of Psychiatrists' *Spirituality and Psychiatry* Special Interest Group [[www.rcpsych.ac.uk/spirit](http://www.rcpsych.ac.uk/spirit)].

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