# Long Article

## Topic

Combining diverse information sources, the study examines how health professionals treated polio throughout the years, and the related debates that took place within the medical community. (760)

## Summary

### The Origins of Polio Provocation

* Even though sometimes Polio infections could be mild and have no effect, other times, it could seriously affect the motor system, causing paralysis and even death (760).
* NFIP was an organization created by Roosvelt to combat Polio medically and mediatically. It gathered funds from an annual drive, attended mostly by the middle class (761).
* Using the resources of the NFIP, doctors and researchers were able to study more deeply the causes of polio, and the degree of influence other factors had in the infection (761).
* The first factor that was linked to higher polio infections (bulbar kind) was tonsil surgery (761).
* Medical professionals discussed how to balance risk posed when not performing a much needed tonsil surgery on a patient with the risk of that patient contracting polio in the weeks following an operation (762).
* Dr Gaylord W. Anderson demonstrated that tonsillectomies tripled the change of a patient contracting a polio and becoming paralyzed (762).
* The media attention these studies received combined with doctors’ caution, meant they could no longer perform surgery the same way they used to (763).
* German physicians -> Neosalvarsan injections -> paralyzed in receiving limb
* France -> cholera vaccine -> paralyzed in receiving limb
* Italy -> small-pox vaccine -> paralyzed in receiving limb
* The relationship between certain forms of immunization and an increase in the risk of becoming the victim of a severe case of polio began to become recognized among the European health community (763). Similar studies took place in the United States, but were not pieced until later, when new English and Australian papers surfaced corroborating the previous European claims (764-765).
* American researched proposed several possible reasons why injections increased the chance of paralysis, but none were confirmed to be true at the moment. (765)
* Studies by the New York Health Department later found that many more immunizations other than the toxoid-based ones present in the original trials also had similar effects (765).
* After it was determined that the risk of becoming paralyzed by polio doubled for two months after a common injection, it was concluded that immunizations during polio outbreaks should be postponed until they were over to avoid any negative effect caused by the injections (766).

### Health Risks and Policy Debates

* While several American news outlets alerted the population that injections could increase the risk of contracting polio, parents were asked to balance the potential risks of immunization with its benefits (766).
* NFIP, pressured by the public to take a stance, remarked that these studies “‘... were based on tentative evidence’”, but nonetheless recommended that “‘indiscriminate injections’” be avoided during polio seasons (767).
* The polio provocation theory led public policy and the public to become risk averse (767). Due to the increasing evidence supporting the theory, medical practices were “adjusted ... to reduce perceived risks” (768).
* Not everyone agreed with the strength of the policy decisions taken, but even among the opposition, there was an acceptance of the relationship between injections and an increased risk of paralysis (768).
* Even though there was debate on the policy front, both sides were united in   
  “maintaining the faith in public health programmes” (769).

### Polio Provocation and Medical Experimentation

* Hammon together with the NFIP wanted to study the effect gamma globulin had on preventing polio, but that meant injecting substances during an epidemic to already healthy children. After initial opposition from members of the committee that had to approve the study, the permission was granted (770-771), but opposition from other researchers prevailed even after the decision was taken by the Comittee.
* For his own peace of mind, Hammon adjusted the procedures to reduce the risk posed by the children that would partake in the study (772).
* Even though the aim of the study was to analyze the efficacy of the GG against polio, it was disappointing that it did not resolve the polio provocation theory (773).

### The Refinement and Renaissance of Polio Provocation

### Conclusions

Already summarized.

### Acknowledgements

Non relevant information

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Essay

In “Balancing Risks: Childhood Inoculations and America’s Response to the Provocation of Paralytic Polio” Stephen Mawdsley, through the combination of diverse information sources, examines how health professionals treated polio throughout the years, and the debates that took place within the medical community (759-760). The author aims to contextualize the policy decisions taken throughout the twentieth century regarding polio and show how the focus shifted from precisely determining the causes of polio to balancing the risks between going off the path of medical orthodoxy and contracting polio.

The author begins by explaining the effects of polio on the human body, that range from mild, almost invisible, to seriously affecting the motor system, causing paralysis and even death (760). He follows with the history of the NFIP, an organization created by Roosvelt to combat polio medically and mediatically. It gathered funds from an annual drive, which allowed researchers to study more deeply the causes of polio, and the degree of influence external factors had in the infection (761).

The first factor to be linked was tonsil surgery, which led to a higher risk of contracting bulbar polio (761). The first debates started when medical professionals discussed whether it was best to perform needed tonsil surgery or to risk a patient contracting polio (762). The attention media drew to the issue meant surgery could no longer be performed how it used to (763).

After a series of studies across Europe, the European health community began to regnize the relationship between certain forms of immunization and an increased risk of becoming the victim of a severe case of polio (763). Similar studies took place in the United States, but were not pieced until later, when new English and Australian papers surfaced corroborating the previous European claims (764-765). American researchers proposed several possible reasons why injections increased the chance of paralysis, but none were confirmed to be true at the moment (765). Later studies by the New York Health Department found that many more immunizations other than the toxoid-based ones present in the original trials also had similar effects (765). After it was determined that the risk of becoming paralyzed by polio doubled for two months after a common injection, it was concluded that immunizations during polio outbreaks should be postponed until they were over to avoid any negative effect caused by the injections (766).

Even though at first polio research drew attention, it did not compare to the media phenomenon it would then become. While several American news outlets alerted the population that injections could increase the risk of contracting polio, parents were asked to balance the potential risks of immunization with its benefits (766). NFIP, pressured by the public to take a stance, remarked that these studies “‘... were based on tentative evidence’”, but nonetheless recommended that “‘indiscriminate injections’” be avoided during polio seasons (767). Mawdsley goes on to analyze the policy decisions that were taken after the matter popularized.

The polio provocation theory researches put forward led public policy and the public to become risk averse (767). Due to the increasing evidence supporting the theory, medical practices were “adjusted ... to reduce perceived risks” (768). Not everyone agreed with the radical nature of the policy decisions taken, but even among the opposition, there was an acceptance of the relationship between injections and an increased risk of paralysis (768). Something worth noting is that even though there was debate on the policy front, both sides were united in “maintaining the faith in public health programmes” (769).

The author then describes the controversy surrounding a study that a researcher named Hammon wanted to do together with the NFIP. The goal was to study the effect gamma globulin had on preventing polio, but that meant injecting substances during an epidemic to already healthy children. After initial opposition from members of the committee that had to approve the study, the permission was granted (770-771), but opposition from external researchers prevailed even after the decision was taken by the Committee. Even though Hammon defended the study in public, in private, and for his own peace of mind, he adjusted the procedures to reduce the risk posed by the children that would partake in the study (772). Even though the aim of the study was to analyze the efficacy of the GG against polio, which turned out to be successful in acting as a vaccine, it was disappointing that it did not resolve the polio provocation theory (773).

To conclude, even though it still was not understood the epidemiological mechanism of polio, by mid-century, the positive correlation between injections and a higher risk of contracting polio was well known in the United States, presenting a great advancement from the situation in the 1920s. In the 1990s the mechanism was discovered, but that did not solve the prevalente issue at the time, which consisted of balancing the risk of contracting polio with that of forgoing other immunizations in countries where polio vaccines were not widespread (777).