

The Saga of the DTP Vaccine: An American Story

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Senior Division

Individual Website

Media Run Time: 2:58

Student Composed Words: 1199

Process Paper: 499

Process Paper

How did you choose your topic and how does it relate to the annual theme?

On March 11, 2020, a novel coronavirus sent my world into lockdown when I was in fifth grade. I remember seeing on the news thousands of people dying every day. However, when the COVID vaccine became available, less than 50% of Americans were willing to take it. When state and local governments implemented measures to protect public health, some protested these health precautions as an infringement of their civil liberties and rights. This perplexity was later reflected in my own life when one of my friends, whose parents had chosen not to vaccinate him, contracted COVID. At that time, I had received three doses of the COVID vaccine; he had none. He was hospitalized for two weeks, fighting for his life. Whose responsibility was it to protect children's health? The success of American vaccination programs depends on the shared goodwill of the government, vaccine-makers, doctors, and the public. When I explored this year's theme, I knew I wanted to tell the story of this important topic.

How did you conduct your research?

I started my research by reading influential books, academic journals, historical reviews, and news articles on the topic of vaccination and used information from these sources to develop my theme. I aimed to implement multimedia from documentaries, historical newspapers, primary photographs, and monuments. During my research, I discovered my topic's connections to Arkansas history through Arkansas First Lady Betty Bumpers' monumental contributions to public health. Researching in libraries was both challenging and immensely rewarding, particularly at the Arkansas State Archives, the Butler Center for Arkansas Studies, and the UA Fayetteville Archives.

How did you create your project?

I created my project on NHDWebCentral. I implemented important and relevant primary sources such as historical posters, photographs, newspaper articles, monuments, and video clips to bring historical events to life. I aimed to create a historically accurate and informative website that is well-organized, visually pleasing, and easy to navigate.

What is your historical argument?

My historical argument is that, by 1980, America had embraced vaccine mandates and achieved universal vaccination of school-age children. The paradox of vaccines is that the more effective they are, the less necessary they become. Fear of vaccines began to overshadow fear of disease. A biased TV program sparked the public furor over the safety of the pertussis vaccine, shattering public trust in the medical establishment. The controversy surrounding the DTP vaccine reflected the difficulties in balancing individual rights and shared responsibilities, presaging the rising vaccine-hesitancy and anti-mandate sentiments.

In what ways is your topic significant in history?

The saga of DTP vaccination is truly an American story. Our republic is built on the founding principle that the relationship between citizens and the government, and to each other, is defined by the balance between individual rights and shared responsibilities. The controversy surrounding the DTP vaccine reveals enduring tensions within this balance. Amidst the return of vaccine-preventable diseases of the past era, and in the wake of the epochal tragedy of the coronavirus pandemic, it is more important than ever to reevaluate the events and forces that turned America away from vaccines. The survival of humanity depends on our takeaway from this saga.

Annotated Bibliography

Works Cited

Primary Sources

The Arkansas Gazette. "47,000 Shots Given Sunday." September 10, 1973, 2A, microfilm, reel 784. Arkansas State Archives, Arkansas Heritage, Little Rock, AR. 14 Mar 2025.

This primary source is a newspaper article from the Arkansas Gazette in 1973. The article details the great success of the first vaccination clinic in the Every Child By '74 campaign. This source provided historical evidence that helped me understand Betty Bumpers' vaccination campaign.

Arkansas Governor's Mansion. *Every Child By '74*. 21 Sep 1973. Government document. *Dale Bumpers Papers*, Series III, Box 12, Seq # 282, File 8. "Gov Papers - Immunization Program, 1974." Butler Center for Arkansas Studies, Bobby L. Roberts Library of Arkansas History & Art, UALR, Little Rock, AR. 20 Mar 2025.

This primary source is a government document detailing the plan for the Immunization Task Force, created by First Lady Bumpers for the Every Child By '74 Campaign. I used this source to help me understand how Betty Bumpers succeeded in carrying out the state-wide vaccination campaign.

Arkansas State Department of Health: Division of Public Health Education. *Immunization... 1974*. Brochure. *Dale Bumpers Papers*, Series III, Box 12, Seq # 282, File 8. "Gov Papers - Immunization Program, 1974." Butler Center for Arkansas Studies, Bobby L. Roberts Library of Arkansas History & Art, UALR, Little Rock, AR. 20 Mar 2025.

This primary source is an informative brochure about childhood immunization and vaccine schedules from the Every Child By '74 campaign. I used this source as historical evidence to help me understand the immunization campaign.

The Associated Press. "Clinton Immunization Plans in Sync with Efforts by Arkansas Senators." *Fayetteville Northwest Arkansas Times*, February 14, 1993. <https://access.newspaperarchive.com/us/arkansas/fayetteville/fayetteville-northwest-arkansas-times/1993/02-14/page-42/>.

This 1993 newspaper clipping from the *Fayetteville Northwest Arkansas Times* details Arkansas First Lady Betty Bumpers bringing her childhood immunization campaign to the national stage with the help of her husband, after he was elected as Arkansas' senator. I used this newspaper clipping as historical evidence showing that Arkansas' immunization program served as the model for the nation.

Baron, J. *The Life of Edward Jenner: With Illustrations of His Doctrines, and Selections from His Correspondence*. H. Colburn, 1838. <https://books.google.com/books?id=7K9iwCjoUgkC>.

This primary source is an 1838 biography of Dr. Edward Jenner, the Father of Vaccination. The biography contains the speech made by the Five Nations (Mohawks, Onondagas, Senecas, Oneidas, and Cayugas) thanking Jenner for his life saving invention, which was transcribed and sent along with a Wampum belt to Jenner as a gift. I quoted the speech in my section "Development" to show the gratitude with which the smallpox vaccine was received.

The Benton Courier. "225,000 Youngsters to Be Involved in Campaign." *Benton Courier*, August 30, 1973.

<https://access.newspaperarchive.com/us/arkansas/benton/benton-courier/1973/08-30/page-3/>.

This 1973 local newspaper clipping reports First Lady Betty Bumpers' campaign to address the issue of low vaccination rates due to lack of access in the state of Arkansas. I used this source in my section "Success Story" to show how Mrs. Bumpers, as an extension of the government, rallied the private and public sectors to bring about change in her community.

Betty Bumpers: Champion of Childhood Immunization and Peace. Edited by Anna L. Eblen and Martha Jane Eblen. Lanham, MD: Rowman & Littlefield, 2013. Butler Center for Arkansas Studies, Bobby L. Roberts Library of Arkansas History & Art, Little Rock, AR. 15 Mar 2025.

This primary source is an oral history of Arkansas First Lady Betty Bumpers, wife of Governor Dale Bumpers (1972-1976), which I accessed through the Butler Center for Arkansas Studies. The book explores the significance of Betty Bumpers' monumental contributions to Arkansas by championing public health, particularly her campaign to immunize all Arkansas children ("Every Child By '74"). I used this source in my section "Success Story" to understand First Lady Bumpers' work involving her vaccination program.

Bumpers, Betty. "Letter to the Editor." *Camden News*, October 18, 1973.

<https://access.newspaperarchive.com/us/arkansas/camden/camden-news/1973/10-18/page-4/>.

This newspaper clipping is a letter to the editor written by Betty Bumpers, thanking the *Camden News* for supporting her vaccination campaign, "Every Child By '74." The source demonstrates how Bumpers, a champion of child vaccination, recruited National Guardsmen, the media, the public and private sectors, and volunteers to help the vaccination campaign.

Bumpers, Betty. "Every Child by '74." *Comment & Commentary: St. Vincent Infirmary* 1, no. II (1973): 1–4. *Dale Bumpers Papers*, Series III, Box 12, Seq # 282, File 8. "Gov Papers - Immunization Program, 1974." Butler Center for Arkansas Studies, Bobby L. Roberts Library of Arkansas History & Art, UALR, Little Rock, AR. 20 Mar 2025.

This primary source is part of Betty Bumpers' campaign, Every Child By '74, a state-wide effort to vaccinate children. The article was posted in a medical journal as a call to action for nurses, one of the four sectors mobilized in the campaign. I quoted this article in my section "Success Story" to illustrate the context in which First Lady Bumpers launched her program.

Bumpers, Betty. *Immunization Report: Every Child By '74*. 1974. Report. *Dale Bumpers Papers*, Series III, Box 12, Seq # 282, File 8. "Gov Papers - Immunization Program, 1974." Butler Center for Arkansas Studies, Bobby L. Roberts Library of Arkansas History & Art, UALR, Little Rock, AR. 20 Mar 2025.

This primary source is First Lady Betty Bumpers' immunization report, detailing the purpose, goals, scheduling, and other organizational details of the campaign. I used this source to better help me understand how Mrs. Bumpers successfully planned and launched her Every Child By '74 campaign.

Bumpers, Dale. "Imperiled Victories Over Whooping Cough." *The New York Times* [N.Y.], 26 May 1982, p. 30. *The New York Times*, [nyti.ms/4d8yOJA](https://www.nytimes.com/1982/05/26/nyregion/imperiled-victories-over-whooping-cough.html).

This historical newspaper article is a letter to the editor from Arkansas Senator Dale Bumpers in response to the May 18 New York Times editorial article, "Two Ounces of Prevention." Senator Bumpers refuted the editorial for amplifying *DPT: Vaccine Roulette's* claims without verifying the story independently, which, with the benefit of over four decades of retrospect, shows Sen. Bumpers' clear insight. I used a clipping of this newspaper in my section "Firestorm."

Bumpers, Betty. "State of Arkansas Proclamation." 29 August 1973. Proclamation. MC 1204-1 *Betty Bumpers Papers*, Series I, Box 6, Item 1, Scrapbook I. ArchivesSpace at the University of Arkansas, University of Arkansas Libraries, Fayetteville, AR. 24 Mar 2025.

This primary source is the official state proclamation, signed by Arkansas Governor Dale Bumpers, that declared Arkansas Immunization Week. I used a picture of this document in my section "Success Story."

Bumpers, Betty. "Speeches on Immunization." 1977. Speech. MC 1204-1 *Betty Bumpers Papers*, Series I, Box 5, Folder 2. ArchivesSpace at the University of Arkansas, University of Arkansas Libraries, Fayetteville, AR. 24 Mar 2025.

This source is Arkansas' First Lady Betty Bumpers' speech on her immunization campaign, Every Child By '74. I quoted a section of her speech in my section "Success Story" to demonstrate the public's widespread support of the government assuming responsibility for public health.

"Compulsory Vaccination." *Michigan Law Review* 3, no. 4 (February 1905): 310–11.
<https://doi.org/10.2307/1273299>.

This primary source published in 1905 by the Michigan Law Review demonstrates through a series of court cases that the early 20th century opponents of vaccination had been trying to obtain assistance from the courts in order to resist compulsory vaccination mandates. This source helped me to understand that opposition to vaccine mandates is as old as vaccination itself.

Coulter, Harris Livermore, and Barbara Loe Fisher. *DPT : A Shot in the Dark*. Harcourt Brace Jovanovich, 1985.

This primary source is a book written by Barbara Loe Fisher on the DTP vaccine, containing numerous anecdotes of personal stories of children allegedly affected by the vaccine. The book marked the divergence of the DTP movement from vaccine safety concerns to advocacy for parental freedom of choice. I used this source to provide multiple perspectives in the vaccine safety debate.

Engelberg, Stephen. "Vaccine: Assessing Risks and Benefits." *The New York Times* [N.Y.], 19 Dec. 1984, sec. C, p. 53, 68. *The New York Times*, [nyti.ms/43cfWov](https://www.nytimes.com/1984/12/19/nyregion/vaccine-assessing-risks-and-benefits.html).

This primary source is a historical newspaper assessing the risks and benefits of vaccination in response to the DTP controversy. I quoted Kenneth Bart's interview in the newspaper in my section "Tempest."

Every Child By '74: Are Yours Immune? 1974. Bumper sticker. *Dale Bumpers Papers*, Series III, Box 12, Seq # 282, File 8. "Gov Papers - Immunization Program, 1974." Butler Center for Arkansas Studies, Bobby L. Roberts Library of Arkansas History & Art, UALR, Little Rock, AR. 20 Mar 2025.

This primary source is a bumper sticker from the Every Child By '74 campaign to vaccinate every child in Arkansas. I used a picture of the bumper sticker in my section "Success Story" to show how the campaign garnered widespread support from the public.

Every Child By '74: If we could have your attention for a moment...? 1974. Flyer. *Dale Bumpers Papers*, Series III, Box 12, Seq # 282, File 8. "Gov Papers - Immunization Program, 1974." Butler Center for Arkansas Studies, Bobby L. Roberts Library of Arkansas History & Art, UALR, Little Rock, AR. 20 Mar 2025.

This primary source is a flyer from the Every Child By '74 state-wide campaign to vaccinate 225,000 Arkansas children. I used this picture as historical evidence to show how the vaccination campaign raised awareness of dangerously low vaccination rates in Arkansas in my section "Success Story."

Fayetteville North Arkansas Times. "Mrs. Bumpers Encourages Shots for School-Age Children, Others." *Fayetteville Northwest Arkansas Times*, August 7, 1977.
<https://access.newspaperarchive.com/us/arkansas/fayetteville/fayetteville-northwest-arkansas-times/1977/09-07/page-8/>.

This primary source is a 1977 newspaper clipping from the Fayetteville North Arkansas Times detailing Mrs. Bumpers' vaccination campaign's major success. I used this article to demonstrate that, thanks to "Every Child By '74," Arkansas had gone from one of the least vaccinated states to the state with the highest vaccination rates.

Fulton, Fran. "State Guardsmen, Volunteers to Aid Vaccine Program." *The Arkansas Gazette*, September 8, 1973, 5A, microfilm, reel 784. Arkansas State Archives, Arkansas Heritage, Little Rock, AR. 14 Mar 2025.

This source is a historical newspaper detailing First Lady Betty Bumpers' use of Arkansas' National Guard to help with the immunization efforts. I used this source as historical evidence of how Mrs. Bumpers carried out the vaccination campaign.

Fulton, Fran. "Diseases Still Are Threat to Children, Parents Told." *The Arkansas Gazette*, September 2, 1973, 17A, microfilm, reel 784. Arkansas State Archives, Arkansas Heritage, Little Rock, AR. 14 Mar 2025.

This source is a historical newspaper on microfilm, from 1973. I used this source as evidence of Betty Bumpers' campaign, Every Child By '74.

González, Elizabeth Rasche. "TV Report on DTP Galvanizes US Pediatricians." *JAMA: The Journal of the American Medical Association* 248, no. 1 (July 2, 1982): 12. <https://doi.org/10.1001/jama.1982.03330010004002>.

This primary source is a valuable analysis of the documentary, *DPT: Vaccine Roulette*, which ignited the national firestorm over the safety of the DTP vaccine. I used this source to help me understand how *Vaccine Roulette* sparked terror in parents across the nation regarding the safety of the pertussis vaccine, including a picture of the title of the article in my section "Firestorm."

Harris, D. Fraser. "Edward Jenner and Vaccination." *The Scientific Monthly* 1, no. 1 (1915): 66–85. <https://www.jstor.org/stable/6245>.

This primary source is a comprehensive history of Edward Jenner's contributions to science and the world itself, providing an analysis of the impacts of Jenner's work and of the opposition to vaccination from the early days. I used this source in my section "Development" to provide historical evidence of the great appreciation of Jenner's smallpox vaccine around the world.

"Highlights of Dale Bumpers Administration." Vertical Files Collection, CALS Butler Center for Arkansas Studies, Bobby L. Roberts Library of Arkansas History & Art. 15 Mar 2025.

This primary source is a government report covering Arkansas Governor Dale Bumpers' achievements, including the immunization program First Lady Betty Bumpers launched. I used this source to help me understand the extent to which the Every Child By '74 campaign succeeded through the tireless effort and organization of Mrs. Bumpers.

Hilts, Donna. "TV Report On Vaccine Stirs Bitter Controversy." *The Washington Post*, 28 Apr. 1982, D.C. sec., p. 1, 5. *ProQuest Historical Newspapers*, www.proquest.com/newspapers/tv-report-on-vaccine-stirs-bitter-controversy/docview/147434537/se-2. Accessed 27 Apr. 2025.

This historical newspaper was published in the Washington Post eight days after *DPT: Vaccine Roulette* aired, detailing the medical community's response to the documentary and pointing out the imbalances and inaccuracies in the documentary. I used a clipping of this primary source in my "Controversy" section to demonstrate the complexities of the DTP controversy.

Hinman, Alan. "It's the Law: No Shots, No School." In *Deadly Choices: How the Anti-Vaccine Movement Threatens Us All*. New York: Basic Books, 2012.

This primary source is a bumper sticker displayed by a public health official in 1980 as part of the national campaign to vaccinate every child. The photograph, provided by Dr. Alan Hinman,

appears in Offit's book, *Deadly Choices*. I used a picture of the bumper sticker in my section "Success Story."

Holt, Luther Emmett, and John Howland. *The Diseases of Infancy and Childhood: For the Use of Students and Practitioners of Medicine*. 8th ed. 1897. Reprint, NY: D. Appleton, 1922. https://www.google.com/books/edition/_/BA-iMBoSccQC?hl=en&sa=X&ved=2ahUKEwiQ5561yYKKAxUo78kDHea4Kq8Qre8FegQIBxBv.

This primary source is a medical textbook published in 1922, which includes a vivid and stark description of a child's suffering from pertussis. I quoted a passage from this source describing the severe symptoms of this dreadful and deadly disease in my section "Development."

"Hurt the one you love." 1977. Poster. MC 1204-1 *Betty Bumpers Papers*, Series I, Box 6, Item 1, Scrapbook I. ArchivesSpace at the University of Arkansas, University of Arkansas Libraries, Fayetteville, AR. 24 Mar 2025.

This primary source is a poster from the Every Child By '74 campaign. The poster's title acknowledged that shots hurt temporarily but emphasized the importance of immunizations in saving the lives of children. This source provided historical evidence of the vaccination campaign in Arkansas.

Jefferson, Thomas. "Founders Online: From Thomas Jefferson to George C. Jenner, 14 May 1806." founders.archives.gov. National Archives and Records Administration, May 14, 1806. <https://founders.archives.gov/documents/Jefferson/99-01-02-3718>.

This primary source is a letter from President Thomas Jefferson to Dr. Edward Jenner, though Jefferson mistakenly addresses it to George C. Jenner, Edward Jenner's cousin. Jefferson expresses his deep admiration for and gratitude to Jenner for his contributions to humanity. I quoted this letter in my section "Development" to show the significance of Jenner's work.

Johnson, Paul. "Study Group Defines Networks According to News Orientation." *The Arkansas Gazette*, July 8, 1984. *Arkansas Women's History Collection*, Series I, Box 3, B-35, "Margaret Pittman Papers." Butler Center for Arkansas Studies, Bobby L. Roberts Library of Arkansas History & Art, UALR, Little Rock, AR. 20 Mar 2025.

This primary source is a newspaper article from 1984, which announced that Dr. Margaret Pittman would receive the "Arkansas of the Year" award for her work with the pertussis vaccine. I used this source to illustrate the recognition of her contributions to public health.

Lyman, Frances M.H. "DPT's Good Outweighs the Bad." *The New York Times* [N.Y.], 3 Oct. 1982, sec. 11, p. 24. *The New York Times*, www.nytimes.com/1982/10/03/nyregion/dpts-good-outweighs-the-bad.html?smid=url-share.

This primary source is a letter to the editor in the New York Times, written by a woman who survived two of the deadliest childhood diseases, diphtheria and pertussis. The author wrote to the New York Times in response to the public outcry over the safety of the DTP vaccine, citing her own experiences, including the loss of her classmate to diphtheria, in support of the continued usage of the DTP vaccine. The letter offers a valuable insight into the perspective on vaccination of someone who lived in the pre-vaccine era and experienced the severity of diphtheria, tetanus, and pertussis.

Millward, Gareth. "A Disability Act? The Vaccine Damage Payments Act 1979 and the British Government's Response to the Pertussis Vaccine Scare." *Social History of Medicine* 30, no. 2 (August 4, 2016): 429–47. <https://doi.org/10.1093/shm/hkv140>.

This academic article analyzes the DTP vaccine controversy in Britain, a movement analogous to the later Dissatisfied Parents Together movement in America. The source analyzed the official, medical, and public response to the vaccine scare. I quoted parent advocate and leader of the British vaccine safety movement, Rosemary Fox, in my section "Effects" to demonstrate the argument for compensation of parents of vaccine-damaged children.

Mississippi Public Broadcasting. "WEB EXTRA: Childhood Immunizations - Barbara Loe Fisher | Southern Remedy | MPB." YouTube, October 28, 2014. <https://www.youtube.com/watch?v=nRdSOSv4bYM>.

This primary source is an interview with Barbara Loe Fisher about her perspective on childhood vaccination, on Mississippi Public Broadcasting. I used a clip from this documentary in my section "Effects."

National Vaccine Advisory Committee. "Assessing the State of Vaccine Confidence in the United States: Recommendations from the National Vaccine Advisory Committee." *Public Health Reports (1974-)* 130, no. 6 (2015): 573–95. <https://www.jstor.org/stable/43776224>.

This public health report assessing vaccine confidence was released by the National Vaccine Advisory Committee, in light of the measles outbreak of 2014-2015, caused by transmission among unvaccinated people. I used this source to help me better understand the lasting impacts of the pertussis vaccine scare on public confidence regarding vaccines.

National Vaccine Information Center. "Protecting Health and Autonomy in the 21st Century | National Vaccine Information Center." NVIC, 2020.
<https://app.glueup.com/event/protecting-health-and-autonomy-in-the-21st-century-20563/home.html>.

This primary source is the website for the National Vaccine Information Center, the organization Barbara Loe Fisher and Kathi Williams co-founded. Originally named Dissatisfied Parents Together (DPT), the NVIC provides a view into the organization's goals and motivations. I used several pictures from the NVIC in my section "Firestorm."

New York Times Editors. "Two Ounces of Prevention." *The New York Times* [N.Y.], 18 May 1982, p. 22. *The New York Times*, [nyti.ms/4dm1izO](https://www.nytimes.com/1982/05/18/nyregion/two-ounces-of-prevention.html).

This historical newspaper is an editorial article from the New York Times published a month after *DPT: Vaccine Roulette* aired. The newspaper aimed to analyze the risks and benefits of the DTP vaccine, yet gave unwarranted credence to the documentary, amplifying the sensationalism. I used a clipping of this newspaper in my section "Firestorm."

Omer, Saad B., Daniel A. Salmon, Walter A. Orenstein, M. Patricia deHart, and Neal Halsey. "Vaccine Refusal, Mandatory Immunization, and the Risks of Vaccine-Preventable Diseases." *New England Journal of Medicine* 360, no. 19 (May 7, 2009): 1981–88.
<https://doi.org/10.1056/nejmsa0806477>.

This journal article analyzes the increase of vaccine refusal in the US, as well as the geographical clustering of said refusals, leading to outbreaks. I used this source to help me understand the long-term effects of the pertussis vaccine controversy and how it shaped the landscape of modern-day public opinion.

Palfreman, Jon, and Kate McMahon. "The Vaccine War." FRONTLINE. WGBH Educational Foundation, 2017. <https://www.pbs.org/wgbh/frontline/documentary/vaccines/>.

This primary source is a PBS documentary with an interview of Dr. Paul Offit, providing an analysis of the positive effects and benefits of vaccination. This documentary helped me understand the complexities of the vaccine debate.

Pittman, Margaret. *Curriculum Vitae*. 15 October 1976. Biographical material. *Arkansas Women's History Collection*, Series I, Box 3, B-35, "Margaret Pittman Papers." Butler Center for Arkansas Studies, Bobby L. Roberts Library of Arkansas History & Art, UALR, Little Rock, AR. 20 Mar 2025.

This primary source is Dr. Margaret Pittman's Curriculum Vitae, which she compiled originally in 1967. This source provided a view into her background in science, her extensive scientific career, and her numerous accomplishments working with biomedical products, especially the pertussis vaccine.

Pittman, Margaret. "A Life with Biological Products." *Annual Review of Microbiology* 44, no. 1 (October 1990): 1–25. <https://doi.org/10.1146/annurev.mi.44.100190.000245>.

This primary source is an autobiography of Dr. Margaret Pittman, a native Arkansan and one of the pioneering female scientists who worked on the DTP vaccine. This source provided a valuable insight into Dr. Pittman's life and professional career, describing her early life and upbringing in Arkansas, her interest in the sciences, and her highly successful career, particularly in testing the safety and efficacy of vaccines.

Protect These Treasured Moments. 1974. Poster. Dale Bumpers Papers, Series III, Box 12, Seq # 282, File 8. "Gov Papers - Immunization Program, 1974." Butler Center for Arkansas Studies, Bobby L. Roberts Library of Arkansas History & Art, UALR, Little Rock, AR. 20 Mar 2025.

This primary source is a poster titled *Protect These Treasured Moments* from the Every Child By '74 campaign, depicting a mother and her two young children. I used this poster in my section "Success Story."

The Pryor Center for Arkansas Oral and Visual History. "Betty Bumpers Interviews." Uark.edu. University of Arkansas, 2015.
<https://pryorcenter.uark.edu/interview.php?thisProject=Arkansas%20Memories&thisProfileURL=BUMPERS-Betty&displayName=Betty%20Bumpers&thisInterviewee=457>.

This primary source is an interview with First Lady Betty Bumpers, as part of the Pryor Center's Oral History Project. I used a clip from this video in my section "Success Story" to demonstrate how the collaboration between Mrs. Bumpers and First Lady Rosalynn Carter led to the national vaccine mandates.

Thompson, Lea, ed. *DPT: Vaccine Roulette*. DVD. National Vaccine Information Center, 1982.

This primary source is the contentious documentary, *Vaccine Roulette*, that sparked the media firestorm and public controversy over the safety of the pertussis vaccine. I used a clip from this documentary to illustrate the misleading and inaccurate allegations, as well as the alarmist tone.

United States, Congress, Senate, Subcommittee on Investigations and General Oversight of the Committee on Labor and Human Resources. *Immunization and Preventative Medicine, 1982*. Government Publishing Office, 7 May 1982. 97th Congress, 2nd session.

This primary source is the official government publication from the 1982 Congressional Hearing called by Senator Paula Hawkins of Florida. The hearing investigated the tendentious allegations made by the documentary, *DPT: Vaccine Roulette*.

---, ---, Senate, Committee on Labor and Human Resources. *National Childhood Vaccine-Injury Compensation Act*. Government Publishing Office, 3 May 1984. 98th Congress, S.211.

This primary source is the government report from the second hearing held over DTP, when the "National Vaccine-Injury Compensation Program" was established. During the hearing, Jeffrey Schwartz, the president of *Dissatisfied Parents Together*, gave testimony, as well as Dr. Vincent Fulginiti, representing the medical establishment. I used a quote from both of them in my sections "Firestorm" and "Effects."

Images

"Barbara Loe Fisher: No Forced Vaccination." 2021. Photograph. Health Impact News. <https://healthimpactnews.com/2021/barbara-loe-fishers-40-year-history-advocating-for-the-vaccine-injured-and-the-right-to-informed-consent/>.

This source is a photograph of Barbara Loe Fisher, one of the founders of the DPT vaccine safety movement. I used this source in my section "Effects" to illustrate the divergent movement's central message of championing the absolute freedom of choice regarding children's health.

Carpenter, Jay Hall. *Adulation: The Future of Science*. 2019. *The Historical Marker Database*, www.hmdb.org/m.asp?m=256392.

This primary source is a sculpture honoring the life-saving contributions of the three female scientists, Dr. Pearl Kendrick, Dr. Grace Eldering, and Loney Clinton Gordon, who invented the pertussis vaccine. I used a picture of this monument as the background image of my home page and in my final section "Legacy."

CDC. "Pertussis Cases by Year (1922-2021)." Pertussis (Whooping Cough). The Centers for Disease Control, April 15, 2024. <https://www.cdc.gov/pertussis/php/surveillance/pertussis-cases-by-year.html>.

This primary source is the Centers for Disease Control webpage on pertussis, which contains the raw data of cases and mortalities from pertussis from 1922-2021. This source demonstrated that despite the DTP vaccine controversy, vaccination rates in the US did not drop significantly, and there was no major pertussis outbreak, unlike Britain's Pertussis Crisis of 1978. I used data from the website to create a graph of pertussis cases by year as well as a GIF of the recent recurrence of pertussis cases.

Cooper, Richard Tennant. *A Ghostly Skeleton Trying to Strangle a Sick Child; Representing Diphtheria*. 1912. Watercolour. *Wellcome Collection*.
<https://wellcomecollection.org/works/mff3hsaw>.

This primary source is a harrowing illustration of a girl suffering from diphtheria, also known as the "Strangling Angel of Death." The skeleton reaching out to strangle her captures the severity and helplessness in the face of illness in the pre-vaccine era. I used this image in my section "Development" to demonstrate the severity of diphtheria.

Grand Rapids History Center. *Grand Rapids Public Library*. n.d. Photograph. *Figure 1: Grace Eldering; Figure 2: Loney Clinton Gordon*.

These primary sources are photographs of Loney Clinton Gordon, an Arkansas-born chemist, and Dr. Grace Eldering, a public health scientist, who were part of the team of three women who discovered the pertussis vaccine. I used this picture in my section "Development."

Grand Rapids Public Museum. *Pearl Kendrick*. n.d. Photograph.
<https://www.grpm.org/events/public-health-history/>.

This is a photograph of Pearl Kendrick, one of the three female scientists who discovered the pertussis vaccine, working in her laboratory. I used this photo in my section "Development."

Hinman, Alan R. "DTP Vaccine Litigation." *American Journal of Diseases of Children* 140, no. 6 (June 1, 1986): 528–30.
<https://doi.org/10.1001/archpedi.1986.02140200038022>.

This primary source is Dr. Alan Hinman's scientific article on the onslaught of litigations claiming vaccine damage after the DTP controversy. I used graphs from this source in my section "Effects" to show the immediate impacts of the DTP vaccine controversy.

The Jenner Institute. *Doctor Jenner about to Vaccinate a Child*. n.d. Edward Jenner House and Museum. <https://www.jenner.ac.uk/about/edward-jenner>.

This source is an illustration showing Dr. Edward Jenner about to vaccinate a child against smallpox. Below the illustration is a brief physical description of Jenner. I used this source in my section "Development" to show Dr. Jenner's discovery of vaccination and its contribution to society.

NBC News. *Lea Thompson, NBC's Chief Consumer Correspondent*. January 13, 2004. Photograph. *NBCUniversal Media*. <https://www.nbcnews.com/id/wbna3949442>.

This is a photograph of Lea Thompson, a journalist for NBC who produced and wrote the documentary, *DPT: Vaccine Roulette*. I used this picture in my section "Spark."

The Rockefeller University. *Margaret Jane Pittman*. 1947. Photograph. *Digital Commons of RU*. <https://digitalcommons.rockefeller.edu/scientific-staff/1/>.

This primary source is a 1947 photograph of Dr. Margaret Pittman, a Rockefeller alumna, who tested the safety and efficacy of the pertussis vaccine. I used this picture in my section "Development."

Stout, David. "Paula Hawkins, 82, Florida Ex-Senator, Dies." *The New York Times*, December 5, 2009. <https://www.nytimes.com/2009/12/05/us/05hawkins.html>.

This source is a New York Times article about Senator Paula Hawkins of Florida. I used a picture from this source in my section Firestorm.

The Swansea Research Unit of the Royal College of General Practitioners. "Effect of a Low Pertussis Vaccination Uptake on a Large Community. Report from the Swansea Research Unit of the Royal College of General Practitioners." *The British Medical Journal* 282, no. 6257 (January 3, 1981): 23–26. <https://doi.org/10.1136/bmj.282.6257.23>.

This primary source is a scientific article over Britain's Pertussis Crisis of 1978, which stemmed from a significant drop in vaccination rates after the British controversy surrounding the DTP vaccine that was analogous to the American DPT movement. I used two figures from this article in my section "Tempest" to show the effects of the British controversy over the pertussis vaccine.

Secondary Sources

Allen, Arthur. *Vaccine: The Controversial Story of Medicine's Greatest Lifesaver*. New York: W.W. Norton, 2007.

Vaccine is a comprehensive and groundbreaking history of vaccination and its political and cultural intrigue over the past three centuries. I used this source as a springboard for my research, helping me develop a clearer picture of the event. In my section "Development," I utilized a quote of a passage from Allen's interview with Grace Eldering, describing their long hours and late nights spent working to find an effective pertussis vaccine.

Baker, Jeffrey P. "The Pertussis Vaccine Controversy in Great Britain, 1974–1986." *Vaccine* 21, no. 25 (2003): 4003–10. [https://doi.org/10.1016/S0264410X\(03\)003025](https://doi.org/10.1016/S0264410X(03)003025).

This journal article is a medical history of the pertussis controversy in Great Britain, a movement analogous to the one that took place in the U.S. eight years later. The source analyzes the various factors contributing to the pertussis controversy, as well as the involvement of key figures such as Scottish epidemiologist Gordon Stewart. I quoted the medical history's analysis of Stewart in my section "Tempest."

Barnes, Paula. *Ordinary Women, Extraordinary Lives*. Edited by Kriste Lindenmeyer. Wilmington, DE: Scholarly Resources, 2000. Arkansas State Archives, Arkansas Heritage, Little Rock, AR. 14 Mar 2025.

This secondary source is an insightful analysis of the impacts and great contributions of ordinary women. I specifically used the chapter about Betty Bumpers, Arkansas' First Lady, to help me better understand the impacts of her immunization campaign.

Cherry, James D. "Pertussis in the Preantibiotic and Prevaccine Era, with Emphasis on Adult Pertussis." *Clinical Infectious Diseases* 28, no. Supplement 2 (June 1999): S107–11. <https://doi.org/10.1086/515057>.

This secondary source is a study of the pertussis disease in the prevaccine era. I used this source to illustrate the severity of the pertussis disease, especially in infants.

Cherry, James D. "The 112-Year Odyssey of Pertussis and Pertussis Vaccines—Mistakes Made and Implications for the Future." *Journal of the Pediatric Infectious Diseases Society* 8, no. 4 (February 22, 2019): 334–41. <https://doi.org/10.1093/jpids/piz005>.

This source is a journal article about the pertussis vaccine and its effects. I used this source to obtain knowledge on the whole-cell pertussis vaccine, its development, and its effects.

Chow, Maria Yui Kwan, Gulam Khandaker, and Peter McIntyre. "Global Childhood Deaths from Pertussis: A Historical Review." *Clinical Infectious Diseases* 63, no. Supplement 4 (November 12, 2016): S134–41. <https://doi.org/10.1093/cid/ciw529>.

This secondary source is a historical review of global childhood deaths from pertussis published in the Infectious Diseases Society of America. The review studied the impact of pertussis vaccines on mortality due to the disease. I used this source to better understand the lifesaving impacts of the pertussis vaccine.

Conniff, Richard. "The Unsung Heroes Who Ended a Deadly Plague." *Smithsonian Magazine*, March 2022. <https://www.smithsonianmag.com/science-nature/unsung-heroes-ended-deadly-plague-180979547/>.

This source tells the little-known story of three unsung heroes: Pearl Kendrick, Grace Eldering, and Loney Gordon, three women who discovered and revolutionized the pertussis vaccine. I used this source in my section "Development" to describe the severity of the pertussis disease, to provide information on how the pertussis vaccine was developed, and to give an insight into these lesser-known figures.

Fanget, Nicolas. "Pertussis: A Tale of Two Vaccines." *Nature Research*, November 2020. <https://doi.org/10.1038/d42859-020-00013-8>.

This scientific article clearly explains the whole-cell pertussis vaccine, its risks, and its eventual replacement with the acellular vaccine that is in use currently. I quoted the article in my section "Success Story" to explain the rare but significant side-effects associated with the whole-cell pertussis vaccine.

Gallegos, Miguel, Viviane de Castro Pecanha, and Tomás Caycho-Rodríguez. "Anti-Vax: The History of a Scientific Problem." *Journal of Public Health* 45, no. 1 (April 16, 2022): 1–2. <https://doi.org/10.1093/pubmed/fdac048>.

This source analyzes the history of anti-vaccination as a scientific problem, advocating for better understanding of human behavior to prepare for future epidemics and pandemics in wake of the COVID pandemic. I used this source in synthesizing my claim that it is important to balance the rights of individuals' free will with the government's responsibility to protect their peoples by ensuring safety.

History of Vaccines. "History of Anti-Vaccination Movements." The College of Physicians of Philadelphia, 2022.
<https://historyofvaccines.org/vaccines-101/misconceptions-about-vaccines/history-anti-vaccination-movements>.

This source provides a brief history of all the major anti-vaccination movements in history, including the smallpox anti-vaccination leagues in 1800s Europe and America, the DPT movement in the 80s, the MMR antivax movements in the late millennium and finally the "Green Vaccine" movement in the US against thimerosal in the early 2000s. I used this source to narrow the scope of my project at the beginning of my research process.

Hussain, Azhar, Syed Ali, Madiha Ahmed, and Sheharyar Hussain. "The Anti-Vaccination Movement: A Regression in Modern Medicine." *Cureus* 10, no. 7 (July 3, 2018): e2919.
<https://doi.org/10.7759/cureus.2919>.

This source gives a clear, detailed analysis of the recent rise in anti-vaccination movements, based on the belief that vaccines cause more harm than good, as well as an increase in cases of diseases that were previously extinct in the modern world. I used this source to provide evidence on the more recent vaccine-hesitancy movements.

Larson, Heidi J., J. Stephen Morrison, and Katherine E. Bliss. "A Crisis Decades in the Making: Vaccine Hesitancy from Smallpox to Covid-19." *JSTOR*, 2021, 6–11.
<https://www.jstor.org/stable/resrep32133.6>.

This research report analyzes the rise of vaccine hesitancy, as well as barriers to vaccine confidence such as safety concerns, a legacy of discrimination, political arguments, conspiracy theories, alternative health, government requirements, and religious or moral objections. I used this source to help me understand how the recent rise in vaccine hesitancy has been decades in the making.

McKee, Chephra, and Kristin Bohannon. "Exploring the Reasons behind Parental Refusal of Vaccines." *The Journal of Pediatric Pharmacology and Therapeutics* 21, no. 2 (April 21, 2019): 104–9. <https://doi.org/10.5863/1551-6776-21.2.104>.

This scholarly scientific article explores the four categories of reasons behind refusal of vaccinations: religious reasons, personal beliefs, safety concerns, and a desire for more information. This source provided a vital insight into the reasoning and motivation behind anti-vaccination movements.

Offit, Paul A. *You Bet Your Life: From Blood Transfusions to Mass Vaccination, the Long and Risky History of Medical Innovation*. New York: Basic Books, 2021.

This book is a comprehensive and entertaining history of vaccines, specifically the Cutter tragedy, the most infamous medical disaster in public health in American history. This book helped me to understand the significance of the DTP vaccine controversy, as well as the historical challenges in vaccine manufacturing.

Offit, Paul A. *Deadly Choices: How the Anti-Vaccine Movement Threatens Us All*. New York: Basic Books, 2012.

Deadly Choices, written by internationally recognized virology expert and vaccination historian Paul A. Offit, is a powerful analysis of the anti-vaccine movement and its true casualties—the children. I used this source in my project to help me understand vaccination and see through the common myths regarding vaccines.

Offit, Paul A. *Vaccinated*. 2008. Reprint, New York: HarperCollins, 2022.

This source is a compelling book on a little-known aspect of vaccination history: Maurice Hilleman, and his one-man quest to defeat the world's deadliest diseases. Hilleman invented nine of the most common childhood vaccines that are still in use today. This source provided context on the development of many common childhood immunizations.

Plotkin, Stanley A. "The Pertussis Problem." *Clinical Infectious Diseases* 58, no. 6 (December 20, 2013): 830–33. <https://doi.org/10.1093/cid/cit934>.

This journal article covers the modern resurgence of pertussis cases despite widespread efforts to vaccinate, analyzing several factors including incomplete vaccine coverage in certain age groups. I used this source in my section "Legacy" to provide context for the present resurgence of pertussis.

Rothstein, Aaron. "Vaccines and Their Critics, Then and Now." *The New Atlantis*, no. 44 (2015): 3–27. <https://www.jstor.org/stable/43551422>.

This source is a comprehensive analysis of the history of vaccine opposition, dating back to the early days of Jenner's discoveries. It analyses the arguments made by both those in the medical profession as well as ordinary people's concerns. I used this source to help me understand where oppositions and hesitations surrounding vaccination stem from.

Seither, Ranee, Kayla Calhoun, and Oyindamola B Yusuf. "Vaccination Coverage with Selected Vaccines and Exemption Rates among Children in Kindergarten — United States, 2021–22 School Year." *MMWR Morbidity and Mortality Weekly Report* 72, no. 2 (January 13, 2023): 26–32. <https://doi.org/10.15585/mmwr.mm7202a2>.

This source is a scientific report on vaccination coverage and exemptions among kindergarten children across the United States, compiling a significant amount of raw data and analysing it. I used this source to help me understand the recent return of vaccine-preventable childhood diseases.

Shapiro-Shapin, Carolyn G. "Pearl Kendrick, Grace Eldering, and the Pertussis Vaccine." *Emerging Infectious Diseases* 16, no. 8 (August 2010): 1273–78. <https://doi.org/10.3201/eid1608.100288>.

This article is a study examining the life and work of Dr. Grace Eldering and Dr. Pearl Kendrick, the scientists who developed the first effective pertussis vaccine. I quoted this source in my section "Development" to provide a first-hand insight into their life-saving contributions.

Williams, Nancy Ann. "Margaret Pittman (1901–1995)." *Encyclopedia of Arkansas*. Central Arkansas Library System, February 26, 2025. <https://encyclopediaofarkansas.net/entries/margaret-pittman-1738/>.

This source is a biography of Dr. Margaret Pittman, an Arkansas native, who worked with the pertussis vaccine at the National Institute of Health. This source provided background on Dr. Pittman's life and important work, as well as a reference list of related primary materials.

World Health Organization. "A Brief History of Vaccination." WHO, 2022. <https://www.who.int/news-room/spotlight/history-of-vaccination/a-brief-history-of-vaccination>.

This source is a history of the journey of vaccination, ranging from the early days of variolation to most recently the COVID vaccine. I used this source as an overview of vaccination throughout the centuries, providing me with a roadmap of where to research.

Images

Viborg-Hurley School District. "February Character Trait - Citizenship." K12.sd.us, 2019. <https://www.viborg-hurley.k12.sd.us/article/86903>.

This image is a cartoon of a scale balancing rights or liberty and responsibilities or duty, titled "The Scale of Citizenship." This cartoon captured the delicate balance between individual rights and collective responsibilities. I used this cartoon in my section "Legacy."