

Kim Tolley

Vaccine Wars: The Two-Hundred-Year Fight for School Vaccinations

John Hopkins University Press, 2023. 384 pp.

Kim Tolley's book offers several important contributions to the large literature on vaccine controversies, rich with important new information and a coherent, compelling story. First, the book's focus is unique: rather than focus on public health (though the book also addresses the public health effects of vaccine decisions and outbreaks, and offers extensive data on that score, too), the book looks at the unique place schools occupy in the struggle around vaccination rates. Because of this focus, Tolley covers issues I have not seen in any other book—such as curriculum coverage of infectious diseases and vaccines, the role of school officials, including school boards and superintendents, in battles around vaccination rates, the role of parents, and the way the government interacts with both education and infectious diseases. Second, the book's approach is more comprehensive and more interdisciplinary than most books on vaccines. Tolley includes developments in science and public health in the time period covered—early nineteenth-century to present (in the United States), but also an in-depth review of litigation and social activism, and a careful examination of the political context and the different actors struggling. Her story is both top-down—what government did—and bottom-up, what activists, parents and citizens did, and she looks at how these interacted. She also includes careful empirical examination of news coverage of the issues involved and legislation trends.

All of these make the book a valuable addition to the literature on vaccine controversies that covers topics that have not yet been thoroughly examined.

Tolley's thesis is one of both change and continuity from past to present. Although she opens the book by suggesting that “the differences are great” (6), throughout the book she highlights both continuities and dramatic changes. Starting with the similarities across periods, Tolley rightly emphasizes that since early days, alternative medicine practitioners had a role in opposition to vaccines. She also tracks the changes that resulted from growing acceptance of germ theory—alternative practitioners' attitudes changed, and the interaction between alternative medicine and allopathic medicine developed over time, and Tolley provides a careful, nuanced, and in-depth story of these developments. Another common thread Tolley highlights is the role vaccine risks—real and perceived—play in creating hesitancy around and in opposition to vaccines. In the early days, those risks included the very real threats of contamination of the smallpox vaccine with other viruses or bacteria in a time when hygiene was not always practiced, and the risks of the vaccine itself. Closer to today it was both the risks of real but rare vaccine side effects and the risks of harms that vaccines do not cause, but that opponents attributed to them, which contributed to hesitancy. For example, the Cutter Incident (1955)—in which children were injected with a polio vaccine where the virus was not inactivated, in effect, with a live polio virus—caused real harms that shook confidence in the polio vaccine. But the untrue claims of a link between vaccines and autism also undermined trust.

Another commonality is the pattern of comparative risk perception of the disease and the vaccine: fears of the disease leading to high vaccination rates, and then, as a disease decreases, complacency and overemphasis on the vaccine's risks lead to decline in vaccination rates—often followed by the rise of the disease again.

Tolley also reminds us that emphasis on freedom and civil rights was always part of the toolbox of anti-vaccine activists, from the nineteenth-century and on.

Finally, a continuing theme is the tension, for school officials—teachers, principals, boards, superintendents—between the desire to prevent disease in schools and the importance of educating children, which makes officials hesitant to exclude unvaccinated children. Opposition to exclusion is even stronger when children's attendance is connected to funding. Here, too, the story Tolley tells is complex, and different in each period, affected by the political and legal environment as well as the realities of public health.

While even within the common themes there are nuances, developments, and differences, Tolley reminds us that we cannot treat different historical periods as facing the same reality, and that “[n]o society ever experienced the same epidemic twice” (279): disease patterns change, and society changes. Among the differences Tolley highlights, she carefully tracks changes in scientific knowledge (the growing acceptance of germ theory, supported by increasing evidence, and our understanding of diseases) and in attitudes to science. One contribution Tolley provides is to review textbooks children learn from, and compare the coverage of diseases (and vaccines) in the curriculum across time. Further, the way we accumulate knowledge, the way information (and misinformation) spreads also affect risk perception. Here, again, Tolley tells a fairly complex story. Although Tolley acknowledges the rise of misinformation in the internet age, she also talks about the way anti-vaccine organizations before modern times communicated, sometimes very effectively, to parents and other groups, and sometimes misled them into opposing vaccines for reasons that were simply not grounded in facts.

In the later part of the book Tolley addresses the rise of partisan politics as they interact with vaccines and vaccine policies (ending with the COVID-19 pandemic). Tolley reminds us that the divide in vaccine battles was not, for a long time, partisan, but she tracks rising partisanship to the early 2010s—which is earlier than I would have put it, and another important thing I learned from this book. Tolley demonstrates that although not complete, increasingly, attitudes to both vaccines and vaccine mandates diverged on partisan lines, and the COVID-19 pandemic exacerbated that. She connects it to the rise of anti-abortion views and the spillover of those views into concerns about vaccines developed or manufactured using fetal cells, among other things.

All in all, Tolley tells a compelling story of changes in the role of schools in affecting vaccine rates—both through mandates and through voluntary compliance—during almost 200 years of history, and tells it in a clear, accessible, and fascinating way, with abundant data and new insights. It's a powerful addition to the literature.

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