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U.S. Public Perceptions of Measles in the Vaccination and Pre-Vaccination Eras

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U.S Public Perception of Measles in the Vaccination and Pre-Vaccination Eras

Marina Blum | Public Health | Session 2A

Mentor: Professor Laura Nathan, Sociology

For the past several months, I investigated the impact of the measles vaccine on public perceptions of the disease in the United States. My research spans the last century, and captures both the current vaccination and pre-vaccination eras in this country. Experiences with and implications of contracting measles have evolved dramatically since the early 1900s. This project examines the shifting cultural significance of the disease in the United States. In particular, I found that some of the most significant shifts lie in the realm of risk conceptualization, blame, and responsibility.

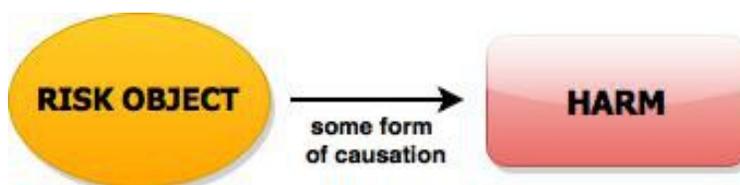
My interest in the subject was initially piqued by the measles outbreaks of the past few years. However, when these news stories emerged, I found myself reading articles on a disease I had never experienced and consequently, knew nearly nothing about. I imagine many in the audience are similarly unfamiliar with the measles, so first, let me give an overview of the medical understanding of the disease in both eras.

Prior to the vaccine's release in 1963, nearly every single child would contract the measles, regardless of class or location. It was regarded as practically inevitable, something of a childhood standard. Measles is among the most contagious diseases known, and it spreads with incredible ease in an unvaccinated population. Generally, it is not a serious disease. Most cases are a brief flurry of fever, spots, and a characteristic hacking cough, over in a few days. While the majority of victims had a mild experience, some children were struck with rarer, more severe consequences. Brain swelling and secondary pneumonia caused lasting damage or even death in the unlucky few. The disease was so common that even this small proportion of total cases translated to several thousand deaths every year in the early part of the century.

The vaccine changed all this. Suddenly, it wasn't a foregone conclusion that a child would get sick with measles. After a few years, it was not even certain that one would *know* anyone who had been ill with the disease. Gradually, the disease and the threat it posed began to fade from public memory. This amnesia is part of what fueled the anti-vaccination movements that sometimes grace the news today. For some parents, the threat of disease seems to pale in comparison with the threat of vaccination.

Measles is an acute disease. As such, it has received almost no treatment in the medical sociology literature, a field which tends to focus on chronic illnesses. Consequently, I turned to material from the sociology of risk for much of the theoretical basis of the research I will present today.

Scholars in the field of sociology of risk make a crucial, basic assumption that risk is socially constructed, rather than an objective quality inherent to objects, people, or actions. It is not a given that a particular object – or disease – will be seen as risky. Several concepts from a very helpful concept from Clarke and Hilgartner is that of a 'risk object' (1992). Their concept works as follows; there is an object – say, a person, disease, or technology – which through some form of causation results in harm to an at-risk party.



Networks of control are built around the risk object in an effort to minimize the harm. In

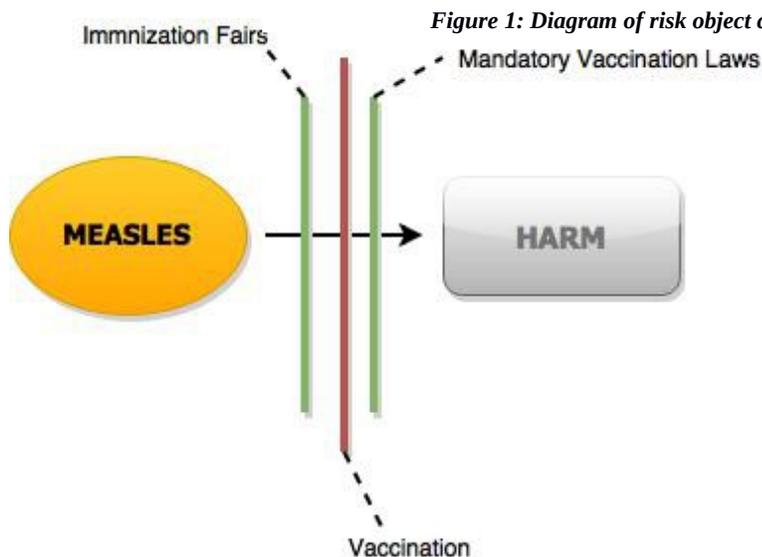


Figure 1: Diagram of risk object concept.

the case of measles, the network is mainly built by government bodies and medical experts, and could be said to contain measures such as quarantine and vaccination, as well as laws like mandatory school vaccination. Health fairs where immunization takes place would also be contained in this network, as would reporting systems to notify officials of incidences of outbreaks.

“Risk object” is a simple concept, but has potentially powerful consequences. The crucial

aspect of risk object and its associated network of prevention lies in its possibility for change. A shift in the designation of the object can have all sorts of social repercussions. A change can redistribute responsibility for risks, change the locus of decision making in regards to protection, and even determine who has the right or obligation to address the hazard. This framework will help explain the impact of the vaccine later on.

A central difficulty of this project is that unfortunately, it is impossible to go back in time and ask people their opinions on the vaccine. Consequently, the information must be accessed indirectly. The way I did this is through a study of major 20th century newspapers. The newspapers were selected on the basis of approximate regionally representativeness, highest circulation throughout the time period, and continuity of publication. The newspapers available for the entire century are too numerous to sample, so I selected four time periods to get a sense of attitudes throughout the hundred years- two before the vaccine, and two following.

Figure 2: A simple example of a network of control for measles.

To research my question, I used a method known as content analysis. It is a sociological method for document study, the documents in this case being newspapers. Content analysis, as Karl Krippendorff (author of a prominent textbook on the subject) puts it, is the study of “who says what, to whom, why, and with what effect?” (2003) Broadly, this is an excellent summary of the process.

First, I stratified the newspapers on the basis of the four time periods, and systematically sampled within each time frame. Then I created a coding scheme that I used to identify themes of interest, and more generally, characterize the information contained in the articles. These codes

essentially allow me to determine “who says what to whom”, and to quantify these qualitative aspects of the articles. The codes consist of concepts I created myself, those I drew from existing literature and codes which presented themselves as I read the articles. After coding, I analyzed the qualities of code groups such as ‘blame-for outbreaks’ to see how frequently and with what characterization particular themes appear in different time periods. This allows me to speculate on why they appear and how they might reflect the perception and attitudes of the time – aka, “why, and with what effect”.

Content analysis makes the assumption that texts are byproducts of ongoing societal conversations of their time. News is related to public attitudes through the theory of “agenda setting”, which states that themes and portrayals featured prominently in media will be similarly prominent, similarly salient, in the minds of the public (McCombs, 2014). So, by analyzing these cultural artifacts, I can approximate the attitudes that their authors might have held and how this message could shape parents’ notions about responsibility, blame, and their child’s experience with measles.

With all this in mind, here is what I’ve been finding. As the vaccine was introduced it shifted the way that the network of control is constructed. In doing so, it changed who – parents, government, physicians- was the active decision-maker responsible for prevention and the protection of children. It shifted where the locus of decision making lies, which resulted in a re-assignment of responsibility and who wears its mantle. To illustrate this change, I’ll compare quarantine and immunization.

Quarantine was standard protocol for disease outbreaks in the era prior to the vaccine. It was imposed by the government *on* infected children and their families, in conjunction with other aspects of the risk network like mandatory school laws barring the ill from attendance (see Figure 3). In this period, there was little active parent participation in prevention besides complying with quarantine, a legal obligation. Consequently, when blame was assigned, it was frequently directed towards the government. When fault for outbreaks is characterized, it was most often pointing to governmental failure – for example, in Figure 5, a clipping from the October 18th, 1912 edition of *The Chicago Tribune*.

But the assignment of responsibility changes in the immunization era (after 1963, the introduction of the vaccine). Now, it is parents who must actively take precautions to protect their child (see Figure 4). Government is still involved, but they take on a new, indirect role by reducing barriers like cost and access. Parents must make the decision to take their children in for immunization. And, interestingly, the immunization era is when the first accusations of parental blame appear, such as in Figure 6, a clipping from the October 27th, 1971 edition of *The Chicago Tribune*.

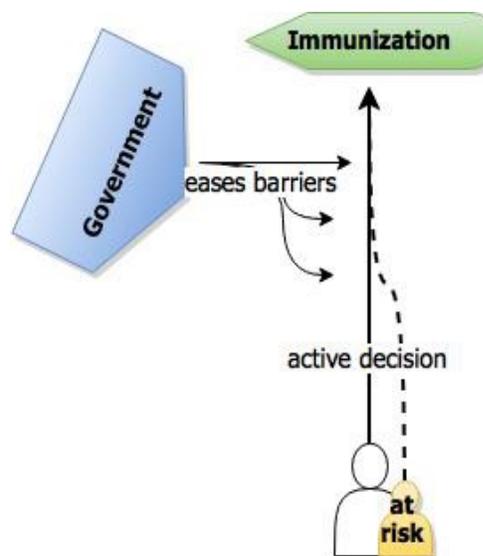
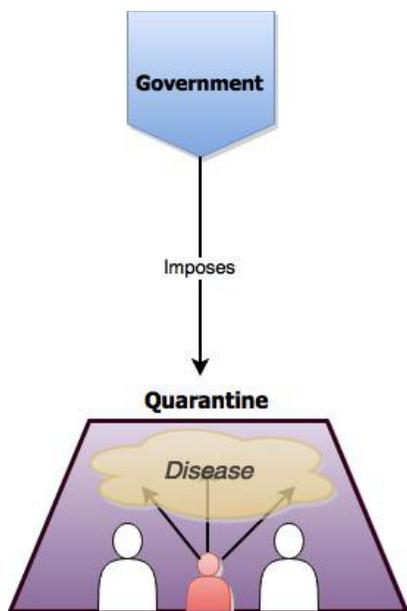


Figure 4

EPIDEMIC PERILS WARDS OF COUNTY

Smallpox, diphtheria, and measles are threatening the children in the Juvenile Detention home, according to Judge Merritt W. Finckney.

Two have measles, one may have diphtheria, and the third is a smallpox suspect. The judge said yesterday this is the penalty which the poor children of Cook county are paying for the unpardonable neglect and delay of the county commissioners.

Figure 5

... new parties are held accountable and are identified as responsible for outbreaks. The introduction of the vaccine shakes up the network of control, and in turn the responsibility for keeping children safe from the disease. The evidence of this is seen in shifting accusations of blame. With the data I've collected, I have been able to trace these trends throughout the century.

► How To Keep Your Child Well

by T.R. Van Dellen, M.D.

IS YOUR CHILD PROPERLY IMMUNIZED?

- UNLESS MORE CHILDREN are immunized against diphtheria, polio, measles and other contagious diseases we may be in for serious epidemics. Mothers in all parts of the country are shirking their duty [thru ignorance or apathy] by not bringing their children in for the necessary shots. The vaccines are available and it is not a matter of cost.

Figure 6

20th Century Trends in Blame for Outbreaks

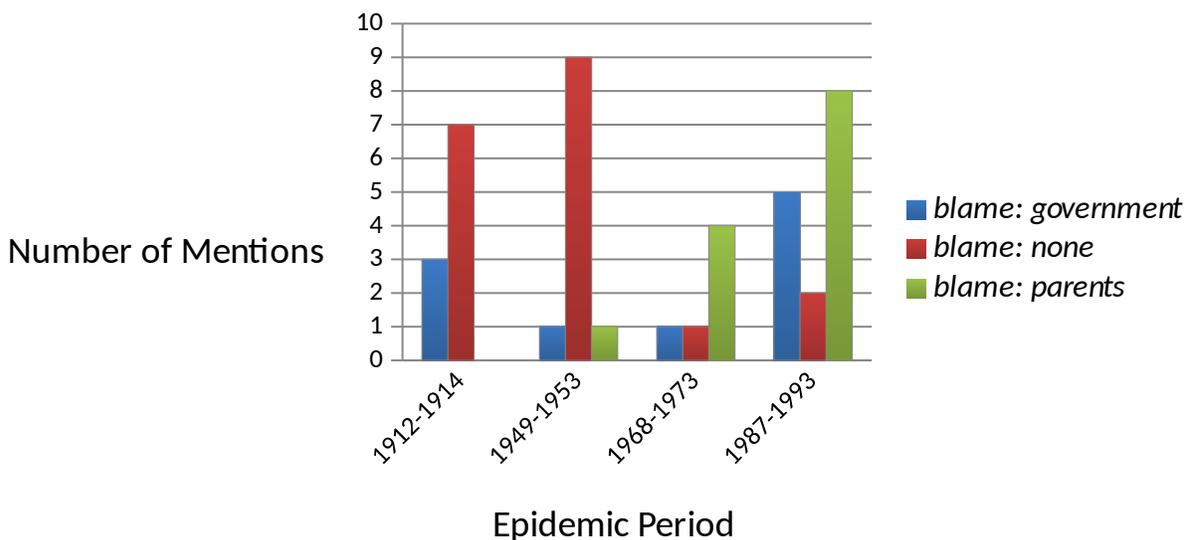


Figure 7: Trends in object of blame accusations for measles outbreaks in newspapers over the 20th century.

More than 90% of articles alleging parental blame are in the post vaccination era, which supports the idea that the vaccine alters the perception of who is at fault. Blame of the government is present throughout, but notably, it is the main form of blame assigned prior to the use of the vaccine.

I am currently in the midst of analysis, and so this is only a preview of the insights that can be gleaned from these articles regarding the measles and its vaccine. I hope to answer many other questions and undoubtedly, discover some new ones along the way. To give you an idea of where my project will be going in the future, here are a few lines of inquiry that I will focus on in the next semester.

First, there are evolving class associations with the disease. There are suggestions in the articles that measles comes to be more strongly associated with lower class, inner city children due to their particular difficulties in accessing the vaccine after its release. This would not be the first time that unequal access to a preventative measure appears after its release. New medical technology is often easier for the wealthy to get access to. I want to see if this holds true for measles. However, I will have to subject these preliminary findings to more systematic analysis.

A second question addresses the relationship between personal choice and sacrifice of the latter for the public good. When we consider parts of the risk network such as mandatory vaccination laws and compulsory quarantine, it is clear that the public is asked – or coerced, at times – to make sacrifices of their own individual autonomy for the benefit of society as a whole. The curtailing of parental autonomy by the government is also one of the central complaints of those in the anti-vaccination movement. How the balance between these two ideas is struck through the century is of great interest to me.

Finally, the characterization of the risk object itself – that is, what is depicted as posing a risk, the source of potential harm – seems to be dynamic, possibly coming to include not only the disease, but also unvaccinated children. If this is true, this could have ramifications for the development of stigmatized perception of those who are responsible for unvaccinated children – their parents. These, and other questions, remain to be answered.

This concludes my presentation, thank you for your time.

Works Cited

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