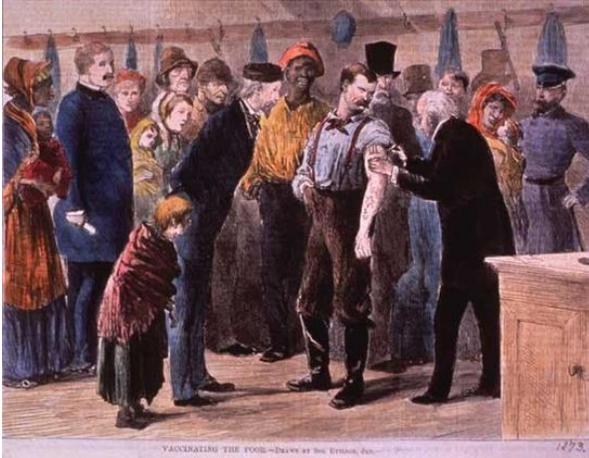


## Smallpox as a Weapon

by Jahnvi Patel

Smallpox is one of the most devastating diseases known to humankind. It is caused by the *Variola major* virus and has no known cure (Smallpox Case Study). However, vaccination has proved to be an effective tool against the virus, especially because the vaccine eradicated it.

The story behind vaccine begins in 1796 with an English doctor named Edward Jenner. He had



noticed that the milkmaids who had previously had cowpox did not get smallpox. So, he used the scabs from a milkmaid and inoculated it on his gardener's son's arm. After a few months, the physician exposed him to the smallpox virus, but he never succumbed to it. Five years and many experiments later, Jenner published his work and vaccination became popularly

accepted (History of Smallpox).

In 1967, the World Health Organization declared they would vaccinate everyone in the world against the disease. Even after lack of funding, staff, and commitment from countries, smallpox was eradicated on May 8, 1980 (History of Smallpox). There are some stocks of smallpox present in Koltsovo, Russia and in Atlanta, Georgia at the CDC, mainly for research purposes. As a result, scientists continue to debate whether or not the variola virus stockpiles should be destroyed – if it falls into the wrong hands, the virus has the potential to be used as a bioweapon.

Since people are no longer being vaccinated against smallpox, this poses a significant threat to all of us. If the variola virus comes back into fruition, there are several methods we can use to combat it. Rapid detection of the virus in patients and in large buildings would help with isolation protocols. That way, if the virus ever does come back, we can easily provide tests and vaccinations against the disease. We can also test antiviral compounds to use against the virus, such as cidofovir (Lane and Summer, 2009). However, the most efficient way to end the argument is to destroy the stocks. If illegal stockpiles exist, the World Health Organization and the countries involved need to cooperate to make sure that a global pandemic does not occur.

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