

**THE IMMUNIZATION STORY**  
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Population immunization for prevention of infectious diseases has prevented more illness and death than any medical advancement ever. Immunization, along with water and food safety, represents one of the greatest public health achievements in mankind's history.

In order to protect a society from vaccine preventable disease, it is accepted that about 90% of the population must have immunity. This is referred to as "herd immunity".

Today you see the results of inadequate immunization: the yearly whooping cough (pertussis) outbreaks in Logan County and the United States; a Philippines measles (rubeola) epidemic that has spread to Ohio (mostly the Amish community) and threatens Logan County; the Ohio State University- Franklin County, mumps outbreak; and perhaps most tragically, a polio epidemic in several African countries. Polio, a disease we thought we had eradicated!

The pertussis outbreaks are based on an immunization that is only about 70% effective to begin with and that loses effectiveness after several years. Nonetheless, except in very young children, whooping cough appears to be much less serious in previously immunized individuals.

With respect to the other infectious diseases mentioned, and also including cervical cancer caused by the HPV virus, politics, wars, or misguided belief systems are the cause of the outbreaks and epidemics.

The debate about vaccines offers an example of the adverse effects of ideology on the public's health. Those who refuse vaccinations, and worse, enlist public and political support on the basis of faulty junk science undermine this greatest of medical achievements and puts everyone at risk. The effect of someone such as Jenny McCarthy is multiplied many times by the power of the internet to disseminate junk as well as good science.

For your information, the only "scientist" who ever produced a paper supporting the immunization-autism connection admitted to falsifying the data and was tried, convicted, and stripped of his license in a British court.

In Africa, ignorance and radical Islamic belief systems prevent adequate immunization and has led to multiple outbreaks of preventable infectious diseases, particularly polio.

Science must inform public health responses to influence policy. This should never go the other way on the basis of faulty science. And that is what is happening.

On the matter of public policy, I have long advocated that government should pay the cost of all immunizations as part of its obligation to protect the public's health. Countries and sub-states that follow this policy have the highest rates of immunizations and the lowest rates of preventable infectious diseases in the world.