Pharmageddon or Pharmaheaven?

In biology, a population is a group of individuals from the same species that can interbreed who coexist in the same place at the same time. Populations represent the health and productivity of the species. However, when an outside source threatens the population, those individuals who are able to overcome the adversity allow the species as a whole to adapt, survive, and thrive. Humans, one of the approximately two and a half million species of extant animals on earth, possess the power of science and technology to help fight the many threats of surviving the world. Through years of experimentation, humans discovered the miracle of vaccines, and worked to immunize millions from once country destroying diseases. “Over the course of more than 200 years, vaccination has controlled nine major diseases: smallpox, diphtheria, tetanus, yellow fever, whooping cough, poliomyelitis, measles, mumps, and rubella” (Kit). In the modern world, there are those who debate whether or not one should vaccine against diseases. Yet, without vaccines, all the progress mankind has made to survive and continue the species despite the many deadly diseases will drastically be reduced.

American parents and school children can vividly remember the yearly vaccinations before attending class in the fall. The laws requiring these vaccines before admitting students
into public schools were passed with the goal of achieving herd immunity in the United States. 

As stated by the Encyclopedia source for Immunization:

Most diseases in Western countries, on the other hand, are controlled through the principle of herd immunity, in which it is held that the transmission of disease will be stopped when an extremely low probability exists that an infected person will come into contact with an unprotected individual. Not every person needs to be immunized, but protection levels of 90 percent must be reached for some diseases. (“Immunization”)

This method of widespread vaccinations allows those who cannot receive vaccines, such as the very young, elderly, and the immune-compromised, to be protected by limiting the number of infection sources. Without transmittable hosts, many diseases die out relatively quickly. Notable examples are smallpox and the black plague; once the vaccine was widespread or all of the infected died these diseases disappeared overnight.

Due to parents’ choices, herd immunity has been reduced in the United States. While the right to vaccine is up to the parents, “the decrease in vaccination rates has led to a return of once-obscure diseases such as whooping cough and measles. In early 2015, a measles outbreak [affected] people who had visited Disneyland in Anaheim, California” (“Mandatory Vaccination”). Had the parents of children who were of age to receive vaccinations followed through the program instead of seeking exemptions, those younger or with weaker immune systems wouldn’t have been infected. While measles sounds like a harmless disease that wouldn’t affect the United States as drastically as other diseases that are vaccinated for, the fact
that any breakouts occurred are sources for alarm. Vaccinating the public is the primary method for preventing uncontrollable outbreaks and reducing the infection rate.

Despite the numbers and facts supporting vaccines, there are those who criticize the mandatory use of vaccines on children. “Anti-vaxxers… question whether vaccines are effective, and some have linked widespread vaccination to the rising number of children with autism, a developmental disorder” (“Mandatory Vaccination”). Parents fear that the combination of too many shots at a time could be the cause of various mental disorders found later in life. The reasoning behind this school of thought is the increasing number of vaccines required by their children in comparison to when they were children and the rising of new forms of mental diseases being discovered in a seemingly exponential rate. Some vaccines are experimental and rushed by medical companies before thoroughly being tested, such as a vaccine created shortly after the H1N1 influenza virus. Parents also fear that despite assurances by medical authorizes, the wide number of vaccines interacting within the human body along with any other medications that children take could have unseen consequences, the chief concerns being severe allergic reactions or death. Many doctors recommend against mixing medications together due to the drug interactions causes either the reduced effectiveness or reacting in a dangerous manner. There is little known about how the vaccines could be interacting within the human body and whether the combination of attuned-live vaccines such as measles and polio could cause either to mutate or become stronger instead of protecting the human body. Scientists and parents worry that the spread of vaccines might cause stronger, super diseases to emerge that could be far more dangerous than current diseases.

As valid as some of these concerns are, the greater threat to both American children and adults are the return of once deadly diseases that are still plaguing Europe. While the previously
mentioned measles is mostly gone in the United States, only appearing in small outbreaks, in Europe the disease is still killing children in the Democratic Republic of Congo. “In developing countries, structural barriers are a primary cause for the lack of vaccination. Healthcare providers and clinics often suffer from severely limited resources” (Nesson). Due to this lack of resources, diseases like polio are reemerging in Ukraine despite a viable vaccine existing for over sixty years. “Communicable diseases with epidemic potential continue to be the main cause of mortality in children ages one to 59 months worldwide” (Cone). With the decreasing of vaccinated children because of either the media’s bias or parent’s choice, and the lack of proper health care and vaccine regulations, countries in Europe battle with diseases that for many Americans were parts of medical history which seemed inconsequential to modern life. As stated by Doctors Without Borders, who have been on the front lines of this disease war fighting infections and outbreaks worldwide, “Our MSF colleagues have described this ongoing battle against measles as the equivalent of fighting a forest fire blindfolded” (Cone).

In the modern Internet world, the online sphere is filled with criticisms and debates from millions of users. When those criticisms drown out the voice of reason and logic, many unforeseen circumstances may occur. In the case of vaccines, parents have the right to seek out exemptions should their religious or moral dilemmas prompt them to do so. However, parents should think upon how many thousands of children once died from what is now a preventable disease, and in some places is still killing other parents’ children. Vaccines are the only way to protect not only their child, but all the other children in their country, and perhaps someday the world.
Works Cited


