Vaccines: A Safe Necessity

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Vaccinations are a requirement in most schools today. Even so, parents are denying the necessity of vaccinations and sending their kids to schools. This selfish act only leaves the rest of the students and anyone around them at harm. The essential standards of vaccinations are placed for the safety of a whole population. Denying this would be putting everyone else at risk. Current struggle to eradicate measles is being impeded by this ignorance. By the year 2014, the measles eradication program has been able to prevent 400,000 deaths per year (Holzmann, Hengel, Tenbusch, & Doerr, 2016, p. 201). This progress will stagnate as global conflicts and other diseases arise. This program has already reached astonishing success, but the resistance to vaccination will thwart that progress. A majority of this resistance is present on major social media sites as Facebook and Twitter. One popular page of Facebook, named vactruth, has over 90,000 likes. This page advocates anti vaccination with comments such as “vaccines injure & kill”. These popular opinions compel others to neglect the safety that is provided by vaccines. These anti-vaccination advocates claim that vaccines offer no benefits to anyone. The trending twitter hashtag AntiVaccine also follows similar beliefs.

Vaccines are a safe medical necessity that provides for safer communities for generations ahead. The importance of national and global health is simply being overlooked by most parents in this current medical climate. This negligence could result in drastic consequences that could’ve been easily prevented. Through strenuous efforts of science and medicine, humanity has achieved great successes such as the eradication of smallpox through vaccination. The current program to eradicate measles has also provided promising results. However, when the availability and access of vaccines are being neglected, people aren’t just putting themselves at risk, but they are exposing the whole population on the global scale to the possible outbreak of diseases. This approaches the issue of herd immunity. Administering vaccines now provides for a safer community for generations ahead of us. To promote the safety and effectiveness of vaccines scientists have been conducting cautious analysis of vaccines and the speculations of the public. These studies have made vaccines safer for administration. Through all this promising progress of vaccines, Larry Cook offered two rebuttals. One of his rebuttals mentioned the dangers of ingredients such as gelatin and aluminum in vaccines (Cook, 2016). His second argument emphasizes the danger of mercury and autism connected with vaccines. Just like the eradication of smallpox, other major diseases can be eradicated through this cooperative effort. The families and children in the future generations can live without the fear of an outbreak of diseases. The families today can live without this fear as they vaccinate themselves and their children.

The complete eradication of smallpox is a triumph for modern medicine. Overcoming this obstacle has helped scientists prosper and attack against other diseases. The next target for eradication is the disease measles. Dr. Holzmann stressed that efforts of this vaccination program has lowered the annual deaths by 78% (Holzmann et al., 2016, p. 203). Before the efforts to vaccinate against measles has begun over seven to eight million people died by the MeV infection annually. According to Dr. Holzmann, current statistics indicate that over six million deaths are being prevented annually compared to the pre-vaccination era (Holzmann et al., 2016, p. 205). This provides valid support for the effects vaccination has on the global scale. This progress was possible since the beginning of the program and even more lives are being saved since the eradication of smallpox. Other diseases such as polio have become nearly nonexistent. This cooperative effort has provided the human race with such progress, that denying the vaccines now would only harm the cause. So many lives are being saved due to the administration of the many vaccines. Individual administration of vaccines is an important aspect of these movements. Diseases such as Hepatitis B and influenza are dangerously harmful for infants. The vaccines for these diseases have to be administered at a young age since that’s when children are extremely susceptible to the harmful effects of these diseases. Neglecting the vaccinations will not only put that child at risk, but also those around them. The importance of vaccines has been proven through the eradication of smallpox, the progress of eradicating measles and polio, and the safety they provide from early childhood diseases. This importance shouldn’t be overlooked. Higher rates of vaccination lead to safer communities and herd immunity.

Herd immunity creates safety within the population to resist against an outbreak of disease. Herd immunity is the final phase necessary for complete eradication of diseases. As seen in the data for the measles vaccine program, the number of people being affected by the MeV virus drastically decrease by nearly 78% in the decade the program was taking place. This is because the more people who were immune to the disease, the more contained the disease becomes. Dr. Eunha Shim that the “38 measles outbreaks in the US during 2001-2008 were among those who exempted themselves from the vaccines” (Shim, Grefenshette, Albert, Cakouros, & Burke, 2012, p. 195). Cooperation with the vaccination regulations could have prevented such an outbreak. The cooperation of such a large population will make the eradication of diseases possible. Individual negligence only threatens the community that is growing to become immune. Outcasts that decide not to vaccinate themselves and their children are left vulnerable to the many diseases they come into contact with. These diseases can rapidly spread once they acquire a mode of movement so random and quick as humans. This could lead to exposure of the disease to multiple groups of people in the surrounding area that are still vulnerable to the disease. Dr. Shim claims that “the probability of infection among the unvaccinated is 63%” (Shim et al., 2012, p. 198). Therefore, vaccinating would lead to safer containment of a disease in the case of an outbreak. Furthermore, the spread and likeliness of an outbreak would also be limited with the increased herd immunity from the increased participation of vaccinations.

The Vaccine Safety Datalink is an organization with funding to analyze and validate the safety of vaccines. The scientists of VSD has performed studies to test the accusations of the public against vaccines. Such a study consists of the effect of the Hepatitis B vaccine on the patients. The scientists at VSD performed a multisite case control study to understand if this vaccine caused any autoimmune thyroid diseases. After studying through over 600 of these diseases they have confirmed that having ever received the hepatitis b vaccine didn’t increase the risk of contracting these other disease (Baggs, Gee, Lewis, & Fowler, 2011, p. 49). Some other studies after extensive analysis revealed that children aged 6 to 23 months weren’t at risk from the inactivated influenza vaccine and that thimerosal traces in vaccines were so insignificant that no neuropsychological harm could be done by vaccine containing this component (Baggs et al., 2011, p. 49). These thorough studies have cleared some speculations addressed by vaccine skeptics. The VSD continues to validate the safety of vaccines through rigorous studies. These studies further reduce all the skepticism against vaccines. The studies done by the VSD ensure that vaccines are safe and promote their use for the improved herd immunity and safety of the population.

The safety of vaccines has been analyzed over the years and have been analyzed to ensure their effectiveness and validated the safety of the contents still being used today. Some of the controversial elements that are often mentioned are aluminum, mercury, and gelatin. Larry D. Cook claims that both aluminum and mercury cause severe neurological damage (Cook, 2015). These accusations have been assessed and proven wrong by studies done by Dr. Offit and Dr. Jew. After finding that “no adverse reactions” were observed in mice receiving 62 mg/kg/day, Dr. Offit concluded that a dose of vaccine consisting of 2mg/kg/day was a safe regulation to administer to patients (Offit & Jew, 2003, p. 1397). This low amount of aluminum also accounts for the daily intake of the element by other means. Therefore, this low amount found in vaccines is safe to administer. Mercury in vaccines was caused some concern within the public. Like Aluminum the contents of mercury were also decreased drastically to validate the safety of the doses. Dr. Offit has verified that the “dose of mercury is bracketed within 95% confidence intervals and the lower confidence interval is divided by an uncertainty factor of 10” to indicate the lowest necessary dose used in vaccines (Offit et al., 2003, p. 1395). This drastic decrease of mercury in vaccines is considered an insignificant trace which causes no effects upon administration of the vaccine.

The insignificant amount of mercury found in vaccines further debunks the myth that vaccines cause autism. These small traces were too insignificant to cause any harm. According to CDC, studies have been done to confirm that the mercury containing additive thimerosal does not cause autism (“Vaccines do not”, 2015). Nine studies funded by CDC have found no connection between mercury and autism. Apart from this, the original study was proven to be tampered with to provide false results to the public. The other component of vaccines that raised questions was the allergic reactions to gelatin. This component was present in the DTaP vaccines used in Japan. Dr. Rita K. Jew emphasizes that hydrolyzing gelatin has severely reduced symptoms such as anaphylactic shock from the gelatin present in vaccines (Offit et al., 2003, p.

1396). These changes made the vaccines safer to the whole population. Furthermore, even allergies to the contents of these vaccines such as gelatin were remedied.

The various skepticisms against vaccines only prevent the breakthrough of humanity to eradicate more diseases other than just smallpox. Some other diseases have become less prevalent as the rates of vaccinations have gone up. The theory behind herd immunity works well with this cooperation of the whole population. With the larger cooperation, the strong herd immunity has decreased the presence of some diseases almost completely. However, those who deviate only bring raise the possibility of an outbreak. The many skepticisms of vaccines have been disproved by The VSD and other major organizations. This confirmation of safety of vaccines provides the confidence for the use of vaccines among the large population to increase herd immunity and eradicate diseases. Thus, vaccines are proven to be a safe necessity for the healthy future of this generation and the generations to come as diseases are being eradicated.

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