Research Essay

[Name of the Writer]

[Name of the Institution]

Research Essay

**Introduction**

Vaccine or immunization is defined as a way that can help to build up body's immunity to a disease. it would not be wrong to say that vaccine is a guard system that can build up antibodies that can prevent illness. The origination and background of vaccine can be traced back to 20 century when first vaccine was discovered for smallpox. Smallpox was more like an epidemic that killed about 3000 million to 500 million people taking into account that vaccine cured the disease. (Bloom, et, al. 2018). Today, vaccination is more like a necessity that can help an individual to overcome a number of diseases. Usually weakened form of the disease germs is injected into the body in the form of the injection in the arm or the leg. As soon as the vaccination enters body, there is an autonomous function of the production of antibodies that could find actual germs of the disease. There are a number of vaccinations that are life long, taking into account that once injected, body will be safe from the disease for complete life span. In the same way, there are a number of diseases in which there is no vaccination required because the virus of fairly mild such as strains of cold virus. (Attwell, et, al. 2019). On the other hand, viruses like polio or smallpox may be life-threatening because they can even cause death. Vaccination is one of the tools that can play a major role in the development of health, side by side vaccination programs is a utilitarian approach that is interlinked with other departments of life such as society, healthcare, economics and politics. (Attwell, et, al. 2016). In a nutshell, it can be analyzed that the vaccination programs play a significant role in the development of health, adhering to the core principles of sustainability of both resources and lives.

**Discussion**

It is significant to note that in past decades, there was a massive reduction in the incidence of epidemic and other viruses that can cause death, which is a major tribute to vaccination. The impact of vaccination can be analyzed and estimated during the 20 century, also known as, vaccination for children era. It is important to note that the total number of children that were prevented by vaccination was more than 322 million, there were 21 million hospitalizations and there were about 731,700 deaths. (Jacobson, et, al. 2016). It is evident that a massive contribution to the sustainable health system is made as a result of vaccinations. It is important to note that vaccines have reduced the burden of medicines as well as disease. According to the World Health Organization, modern research has proven that development in vaccination has resulted in the production of less reactogenic products taking into account the vaccines that are produced in the cell structure. (Frieden, et, al. 2015). Such vaccines have mitigated the necessity of adhering to therapeutic drugs and the utilization of the techniques that are more expensive and less effective.

It is equally critical to note that misguided vaccinations and other practices have paved the way for less vaccination coverage that not only compromise the health of an individual but it has affected the overall paradigm of the validity of vaccinations. It is asserted that the counted and minor negative aspects of vaccines are presented in a more exegetical and exaggerated way leading to inefficiency in belief that suggests vaccination for curing diseases. According to research by Medline, it is highlighted that there is a great epidemic approach towards vaccines where the keywords vaccine has been searched for about 2655 times greater than the other search tabs. (Luyten, et, al. 2016). Global health is another ideology that is addressed by the use of vaccination program taking into account that a good deal of substantial progress has been observed on global health over the course of last several years in terms of both population and individuals.

In accordance with the relative progress of Global Alliance for immunization and Vaccines, it has been brought into insight that vaccination programs are one of the staunch medical progress over the course of the next ten years. The global census has asserted that it is to be noted, vaccination programs have a greater approach in terms of benefits rather than risks taking into account that a particular vaccine should be used for particular target groups and for a particular disease. (Luyten, et, al. 2016). However, there are several aspects that reflect the use of vaccines in term of developmental health, there are a number of features that infer a more practical approach to developmental health.

**Global necessity**

There is an increased approach towards evolution in the healthcare system, taking into account that there are a number of novel techniques that can save the health of an individual. It is asserted that the global coverage of vaccination programs plays a major role in mitigating numerous infectious and viral disease. Despite evolution, people die of infection and vaccination programs are the most effective approach to treat infection, even avoidance of infection. There are 6.6 million children who die every year because of any kind of infection, taking into account that vaccination programs are required to treat those children. (Parashar, et, al. 2016).

The global importance of vaccination programs has been described by the Global Alliance for Vaccination and Immunization, highlighting that a severe infection such as polio has been controlled to major extent just because of vaccines so it is assumed that there would be several future global prospectuses that are expected of vaccines. (Dans, et, al. 2018). However, 68 World Health Assembly has asserted, although Vaccines are a necessity and they are playing their most effective part still, Global Vaccine Action Plan is required so that all resolutions can be synchronized and collective efforts can be taken to cure diseases. (Chiller, et, al. 2019).

**Mitigation of disease without reoccurrence**

There are a number of medicines that provide timely and temporary defence from a particular disease. Vaccines can not only prevent an individual but a community taking into account that when immune level of a community falls, they are a major threat to any kind of disease. There are a number of infectious diseases that are a part of medical history but there is no sign of existing epidemic. There were about 1600 measles cases in the United States of America, taking into consideration that still it is one of major part of medical history in numerous of parts of world and countries such as Pacific, Europe, and Asia. (Gilardi, et, al. 2018). However, the reduced and mitigated rate of Measles in the United States of America highlight the fact that vaccination programs can prevent the reoccurrence of a disease and it is a major tribute to global health and development of health. Reoccurrence of disease is more like a dilemma because both, community and healthcare system cannot go beyond the realms of finding new ways to treat the same disease. Vaccination has saved much time and resources by mitigating the reoccurrence of disease. (Gilardi, et, al. 2018).

**Lack of toxins**

There are a number of myths about vaccines, where one of the major myth infers that vaccines are actually loaded with toxins. Beginning from the antivaccination movement, it has been highlighted that vaccines incorporate resistance against a particular disease and the concept of resistance was challenged from various spectra of life such as religion, morality and ethics. There are a number of people who think that this resistance can be a product of certain toxins that prevent a disease to occur. (Lu, et, al. 2018). Although it is evident that there are some major risks that are associated with vaccines but a complete paradigm of shift from something very beneficial to injurious was unexpected. The myth of toxics was a huge question mark on the validity of vaccine taking into account that mercury in thimerosal was termed and assumed to be a major cause of autism. The studies have failed to link toxins with vaccination programs, highlighting that there are no toxins in vaccines that are injurious to health. There are a number of medicines that have certain materials that are harmful but vaccines don't contain toxins that could impact the health and, in this way, vaccination programs are a code to live because it saves health without any adherence or association with side effects. (Mohanty, et, al. 2019).

**Required Dose**

Variables of medication and the medical product play a significant role in determining the regiment of the body. (Mohanty, et, al. 2019). It is important to note that there are a number of patients with medical histories where a minor dose has affected them badly. The reaction of medicine can have a strong and negative impact on the body, negating the positive side. However, vaccines are contributing to the development of health because they are just the required dose. (Gilardi, et, al. 2018). There are fewer or no cases that could quote a harmful or negative side of vaccines in terms of injection. Although there are a number of variables that are to be considered while choosing a vaccine and injecting it, still there are very few cases of side effect of any vaccine on patient. The instructions and information regarding perspective about vaccination programs needs to be clarified, taking into account that it can save an individual from any adverse impact that could lead to harm human body. (Mohanty, et, al. 2019).

**Elimination of disease**

Elimination of disease is one of the core principles and objective associated with vaccination programs taking into account that vaccines can eliminate the disease. The point of controversial analysis is the fact that there are a number of medications that are meant for treating and curing a particular disease but they are not actually well designed for their function that may lead to health complications. It is asserted that vaccines are actually the desired product for curing a particular disease, the analysis of efficiency reflects that vaccination programs are contributing to health on such a higher level that it can serve prevention to any future or upcoming disease as well. (Layton, et, al. 2019). It is significant to note that elimination of disease was one of the agendas for the introduction of any medical intervention, that can act as a defence to future disease asserting vaccination programs are a major section of health and medical world.

**Accountability of complications. Mortality and morbidity**

Elimination of a disease is an extension to a number of other features and concerns in healthcare, where the task of introducing medicine is to address health complications and reduce the rates of morbidity and mortality. It would not be wrong to say that these aims are connected yet separated ideas. (Chotta, et, al. 2019). Although three of the terms form different departments in health care where each of it plays a significant role in determining the adequacy of life and existence. Complications, morbidity and mortality is also concerned as a variable that is adding to the role of vaccine in the development of health. Complications in normal health and life pave the way for the idea of disease and the stance of being diseased paves the way for mortality as well. Vaccines address the three departments individually, taking into consideration that there are a number of vaccines that are meant for mitigating health complications such as vaccines for the lifelong resistance against disease. (Chiller, et, al. 2019). Morbidity is directly addressed by vaccine by inferring that the aim of introducing a vaccine was to address the diseased people while mortality is targeted by vaccines due it interventions that can save a life from life threatening diseases such as measles and polio. In a nutshell, all the aspect of vaccination programs addresses and add to human health. (Chotta, et, al. 2019).

**Prevention of Infections**

There are a number of infections that are epidemic and such infections are transferable from one human body to another taking into account that a whole community can be doomed to death. (Righolt, et, al. 2019). It is significant to note that vaccination programs can save infection by making the body immune to it. It also highlights that vaccination program is meant for determining and saving future health as well such as polio vaccine that can help a child fight against polio.

**Source Drying**

Source Drying is an ideology that highlights the effectiveness of disease by catering to the source. (Layton, et, al. 2019). There are a number of daises that are caused actually because of a common source taking into account that the threat cannot be mitigated until the influence of source is diminished. In the world of healthcare, there are very few medicines that could address source drying because individual health is considered under the impression of changing variables. (Gilardi, et, al. 2018). However, vaccination programs play a significant role in source drying taking into account that it can mitigate or immune the basic drivers of disease or infection. (Layton, et, al. 2019).

**Barrier to antibiotic resistance**

One of the major dilemmas is antibiotic resistance, taking into account that it is one of issues that are faced by practitioners and researchers. (Parashar, et, al. 2016). The resistance of antibiotics is getting so strong that a large number of antibiotics has to be shunned out of practice. The growing resistance of antibiotics has paved the way for global disease taking into consideration that any disease approaches global paradigm when there is no effective control for it. (Righolt, et, al. 2019). Vaccination programs have played a significant role in acting as a barrier to the antibiotic existence taking into account two major aspects. Firstly, vaccination programs allow individuals to develop global resistance by vaccination. It is one of the ideas that has gained much support over the course of years because getting vaccinated for a particular disease will automatically mitigate and reduce the occurrence of that disease. Side by side, evolution in vaccination programs have made communities to overcome particular disease not only in the current time but for the future as well. It would not be wrong to say that antibiotic resistance is greatly mitigated by the use of vaccines. (Chiller, et, al. 2019).

**Conclusion**

An exegetical analysis reveals that vaccination programs are more like an innovation that has to broaden the paradigm of healthcare and medicine. It would not be wrong to say that vaccination programs have shifted thoughts from disease centred society to a welfare society where people can be protected from serious illness and otter complications. A number of diseases are cured by the use of vaccines. It is significant to note that vaccination programs are meant for the prevention of diseases that can destroy the overall spectrum of life. Vaccination program is a multidimensional program taking into account that it addresses the other walks of life, one of the major concerns is the empowerment of economic system because previously a number of economic resources were spent on the mitigation of diseases. Side by side, there is great sustainability of the healthcare system, where massive resources are reserved for the time of need.

References

Attwell, K., Dube, E., Gagneur, A., Omer, S. B., Suggs, L. S., & Thomson, A. (2019). Vaccine acceptance: Science, policy, and practice in a ‘post-fact’world. *Vaccine*, *37*(5), 677-682.

Attwell, K., Dube, E., Gagneur, (2016). Vaccine acceptance: Science, policy, and practice in a ‘post-fact’world. *Vaccine*, *37*(5), 677-682.

Bloom, D. E., Fan, V. Y., & Sevilla, J. P. (2018). The broad socioeconomic benefits of vaccination. *Science translational medicine*, *10*(441), eaaj2345.

Burger, E. A., Campos, N. G., Sy, S., Regan, C., & Kim, J. J. (2018). Health and economic benefits of single-dose HPV vaccination in a Gavi-eligible country. *Vaccine*, *36*(32), 4823-4829.

Campos, N. G., Tsu, V., Jeronimo, J., Regan, C., Resch, S., Clark, A., ... & Kim, J. J. (2019). Health impact of delayed implementation of cervical cancer screening programs in India: A modeling analysis. *International journal of cancer*, *144*(4), 687-696.

Chiller, T. M. (2019). Infection control/public health issues in fungal infections. *Pathology*, *51*, S61-S62.

Chiller, T. M. (2016). public health issues in fungal infections. *Pathology*, *51*, S61-S62.

Chotta, N. A., Mgongo, M., Uriyo, J. G., Msuya, S. E., Stray-Pedersen, B., & Stray-Pedersen, A. (2019). Awareness and Factors Associated with Health Care Worker’s Knowledge on Rubella Infection: A Study after the Introduction of Rubella Vaccine in Tanzania. *International journal of environmental research and public health*, *16*(10), 1676.

Dans, A. L., Dans, L. F., Lansang, M. A. D., Silvestre, M. A. A., & Guyatt, G. H. (2018). Controversy and debate on dengue vaccine series—paper 1: review of a licensed dengue vaccine: inappropriate subgroup analyses and selective reporting may cause harm in mass vaccination programs. *Journal of clinical epidemiology*, *95*, 137-139.

Frieden, T. R. (2015). The future of public health. *New England Journal of Medicine*, *373*(18), 1748-1754.

Garland, S. M. (2019). Population-level impact and herd effects following HPV vaccination programs: a global view. *Pathology*, *51*, S62.

Gilardi, F., Castelli Gattinara, G., Vinci, M., Ciofi Degli Atti, M., Santilli, V., Brugaletta, R., ... & Zaffina, S. (2018). Seasonal Influenza Vaccination in Health Care Workers. A Pre-Post Intervention Study in an Italian Paediatric Hospital. *International journal of environmental research and public health*, *15*(5), 841.

Jacobson, R. M., Agunwamba, A. A., St. Sauver, J. L., & Finney Rutten, L. J. (2016). The most effective and promising population health strategies to advance human papillomavirus vaccination. *Expert review of vaccines*, *15*(2), 257-269.

Layton, J. B., Butler, A. M., Brookhart, M. A., & Panozzo, C. A. (2019). Variation in rotavirus vaccination coding in state US medicaid data. *Vaccine*.

Lu, P. J., Yankey, D., Jeyarajah, J., O'halloran, A., Fredua, B., Elam-Evans, L. D., & Reagan-Steiner, S. (2018). Association of health insurance status and vaccination coverage among adolescents 13-17 years of age. *The Journal of pediatrics*, *195*, 256-262.

Luyten, J., & Beutels, P. (2016). The social value of vaccination programs: beyond cost-effectiveness. *Health Affairs*, *35*(2), 212-218.

Mauskopf, J., Standaert, B., Connolly, M. P., Culyer, A. J., Garrison, L. P., Hutubessy, R., ... & Severens, J. L. (2018). Economic analysis of vaccination programs. *Value in health*, *21*(10), 1133-1149.

Mohanty, S., Buttenheim, A. M., Joyce, C. M., Howa, A. C., Salmon, D., & Omer, S. B. (2019). California’s Senate Bill 277: Local Health Jurisdictions’ Experiences With the Elimination of Nonmedical Vaccine Exemptions. *American journal of public health*, *109*(1), 96-101.

Parashar, U. D., Johnson, H., Steele, A. D., & Tate, J. E. (2016). Health impact of rotavirus vaccination in developing countries: progress and way forward. *Clinical Infectious Diseases*, *62*(suppl\_2), S91-S95.

Righolt, C. H., Bozat‐Emre, S., & Mahmud, S. M. (2019). Effectiveness of school‐based and high‐risk human papillomavirus vaccination programs against cervical dysplasia in Manitoba, Canada. *International journal of cancer*.