

# MMR IMMUNITIZATION FOR CHILDREN: PUBLIC HEALTH ACHIEVEMENT

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### *Description of MMR Immunization Program for Infants:*

Infectious diseases are not the leading cause of death today, such as mumps, measles and rubella [2]. The decline of these diseases was not possible without the proposed Measles, Mumps, Rubella (MMR) immunization program for young children [1,2,3]. Although, reports have shown some health issues with the essential immunization of infants with the MMR vaccines [4]. The MMR vaccination has played a significant role in public health, since it addresses population health through the battle with measles, mumps and rubella; this public health achievement would not have commenced without the efforts and initiatives of many people and their processes which has led to the greater health of populations today [3]. This report assesses this achievement in public health, including the history of the MMR immunization program, the success of the achievement, key processes and dedicated people in the MMR immunization program. The communicable diseases that this immunization initiative involves are measles, mumps, and rubella also known as German measles [3]. Individuals can easily contract these diseases through the direct contact of contaminated air or objects with pathogens from an infected person [3]. Children from birth to the age of 5 are more perceptible to these infectious diseases, thus require paediatric vaccination for their own health and the protection of the future health of others [5].

### *History of MMR Vaccination*

Particularly, many social, political and scientific events lead to the development of the MMR immunization program. This includes, the emergence and isolation of the diseases; measles, mumps and rubella from the early 1880s to 1950s, until vaccines were individually introduced for each disease [1]. Many collectives of individuals operated the MMR immunization program during its launch in 1963 and continue today in further

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prevention including the following [1,3]. Under the federal government, the Public Health Agency of Canada is in primary control of the MMR vaccination program and immunization in Canada, while the National Advisory Committee on Immunization (NACI) provide research on vaccinations and immunizations [3]. In collaboration with all levels of government, many other committees work along with the Public Health Agency of Canada such as Health Canada the Committee to Advise on Tropical Medicine and Travel (CATMT) who are accountable for immunization requirements for traveling [3]. Provincial and Territorial governments act as the authoritative role in the allocation of health services in provinces and territories [3]. The key processes that laid out a foundation for continued prevention and the decline in cases of MMR morbidity include the Immunization Policy and the National Immunization Strategy in 2003 [3]. Both policies, allow for the collaborative approach of all levels government and committees in the operation of national immunization, with the National Immunization Strategy acting in the lead role of immunization regulation [3]. Most commonly, measles outbreaks occurred in school environments [3,5]. Prior to the MMR immunization program, epidemic rates of MMR in Canada were high due to the lack of protocol and prevention through proper sanitation and hygiene [6].

### *Success of MMR Vaccination for infants*

Cases of MMR declined in the following years of the launch of the MMR immunization program with lower rates of mortality from MMR [7]. One study has shown with one dose of MMR Second Dose of immunization, 65%- 86% of Canadian children from the age of 5 to 17 to be immune to measles [5]. With a sample group of children at the age of 5, 86% of children were immune to measles [5]. These results are based on, 1047 children and 105 child subjects from each age group from 5 to 17 years old who received vaccinations at the age of 1 year [5]. On the

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other hand, vulnerable populations show a decline such as Indigenous people's disapproval of vaccinations, children and adolescents displaying anaphylaxis have been reported from the MMR vaccination [8,5]. Specifically, Indigenous people use traditional methods of medicine rather than medical treatment including vaccination [8,9]. Due to the fact, some people disapprove of vaccines and do not rely on vaccines because of their personal opinions and beliefs from one's culture or religion [8,9]. Overall, the implementation of the MMR immunization program is a success in prevention, but still involves complications in rare cases of side effects and those who disapprove of vaccinations [5,8,9].

### *Critical Analysis of Public Health Achievement*

This public health achievement presented successful results and negative outcomes of special cases in the inception and process of the MMR immunization program [5,8,9]. A prominent improvement in public health that the program achieves is the low incidence and chance of contracting the diseases in today's era [7]. Additionally, the MMR vaccines last throughout one's lifetime, which is evident by no additional vaccinations are required after scheduled MMR immunization and infectious diseases are not the leading cause of death [7,2]. In contrast, special cases have shown side effects or low immunity to MMR diseases [3,5]. Certainly, there should be importance given to the immunization education for the purposes of parents being knowledgeable and informed consent [5,7,10]. Especially, anti-vaccine campaigns exist in modern society which acts as a barrier in total immunity in society [9]. Further, this can be addressed by strengthening health promotion related programs in schools, workplaces, labs and at home [10]. From an interdisciplinary approach, a collaboration with other sciences like medical anthropology would be strategic in the communication and aiding public health for Indigenous people [8,10]. Moreover, specialists of medical anthropology and the life sciences

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can work together to discover alternative ways of immunization in order to prevent epidemics such as MMR diseases [10]. The application of the Dahlgren and Whitehead model would support the plans of the MMR immunization program by including socio-environmental factors in public health analysis and approaching health issues from this perspective [10]. This modern era has shown, MMR immunization as an essential requirement for public health and the health of the nation especially in prevention of the MMR diseases.

### *Moving Forward with MMR Immunization*

Indeed, the MMR immunization program has notably shaped the future health of Canadians since its establishment in public health, despite particular cases of vulnerable populations [5,8,9]. In terms of education and health promotion, increasing citizens' agency and knowledge of their health can be improved by an interdisciplinary approach in which is a way of confronting the issue of anti-vaccines or those who lack access to the necessary information about proper health [10]. For instance, increasing awareness and health promotion with the application of medical anthropology knowledge in schools, workplaces, labs and homes [10]. Furthermore, an interdisciplinary approach to health issues such as MMR diseases can be valuable in using a cultural perspective in public health when facing diversity and inclusivity [8,10]. For instance, Indigenous people in Canada prefer traditional medicine than biomedical services [8]. From these special cases of MMR, future solutions such as protocols and scientific improvements to the vaccines can be done in the future of the MMR Immunization [5,8,9]. In the prospects of public health, the emphasis of child health is one way of addressing the future generations of Canada.

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