

# Research Report

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## General Assembly III

### Implementing measures to support vaccination efforts globally

**MUNISH '14**



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<b>Forum</b>	GA3
<b>Issue:</b>	Implementing measures to support vaccination efforts globally
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<b>Position:</b>	Chair

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## Introduction

A handful of studies have shown that vaccines are one of the most efficient and successful health interventions of history. Its profitability is immense compared to its costs, and vaccines are known to be one of the key health services of the century to eliminate a majority of the diseases on the planet. More specifically, it is key in reaching the 4<sup>th</sup> Millennium Development Goal, which aims to reduce the under-five mortality rate by two-thirds by 2015. The good reputation of vaccines has been forged over the years, mainly thanks to the eradication of smallpox, known as one of the greatest triumphs of mankind. Besides this, vaccines have saved countless lives and reduced the incidence of diseases such as diphtheria, tetanus and measles. Summarized, vaccines, if developed quickly and used intelligently, can be one of the main solutions to prevent the world from disastrous epidemics and dangerous diseases.

Although vaccines have saved numerous lives, eradicated various diseases and seem to be an extremely viable solution to achieve MDG 4, efforts to promote and extend the field of action of vaccination are still needed to make it even more consequent. Hence, promoting the implementation of measures to support vaccination efforts is an issue of worldwide concern and importance that needs to be addressed rapidly and with adroitness.

## Definition of Key Terms

### Child mortality

Also known under the designation of “under-5 mortality”, this term is defined by the United Nations International Children’s Emergency Fund (UNICEF) as the “probability of dying between birth and exactly five years of age [...]”. Since 1990, child mortality

has constantly decreased, with 12.4 million deaths in 1990, to 6.6 million deaths of children before the age of 5 in 2012.

## Immunization

Often used as a synonym of “vaccination”, the term “immunization” means the fact of acquiring protection against a disease through the injection of a vaccine. Hence, immunization is the result of successful vaccination.

## Millennium Development Goals (MDGs)

The eight Millennium Development Goals, which are to be reached by the year 2015, range from eradicating extreme poverty and hunger to promoting gender equality, empowering women and ensuring environmental sustainability. They are qualified by the United Nations as “a blueprint agreed to by all the world’s countries and all the world’s leading development institutions. They have galvanized unprecedented efforts to meet the needs of the world’s poorest.”

## Vaccine

The World Health Organization defines a vaccine as “a biological preparation that improves immunity to a particular disease. A vaccine typically contains an agent that resembles a disease-causing microorganism, and is often made from weakened or killed forms of the microbe, its toxins or one of its surface proteins”.

## Vaccination

This term is defined by the Oxford Dictionary as the action of giving “a person or an animal a vaccine, especially by injecting it, in order to protect them against a disease.

As the issue at hand reads “Implementing measures to support vaccination efforts globally”, it is in the interest of the report and the future debates to make and keep a clear distinction between vaccination and immunization.

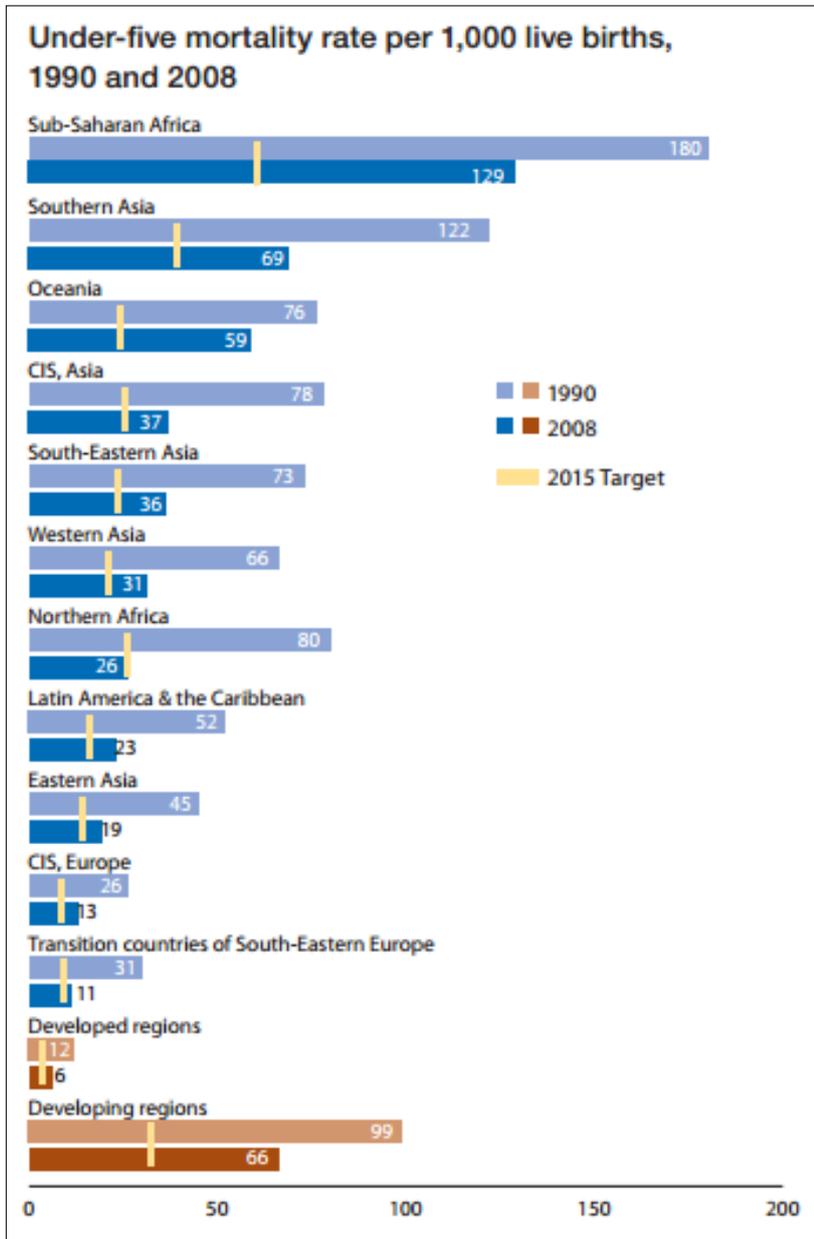
## General Overview

### The importance of vaccination efforts in the Millennium Development Goal 4

The fourth Millennium Development Goal (MDG) is the reduction, by two thirds, between 1990 and 2015, of the under-five mortality rate. It is widely known that most deaths

of children under the age of 5 are preventable or treatable, most commonly through the administration of vaccines.

Since the implementation of the MDGs, and especially MDG 4 in 1990, great advances have been made in the field of prevention of child mortality. Through numerous interventions in developed and poor countries in all the regions of the world, the under-five mortality rate has severely dropped: globally from 12.4 million in 1990 to 8.1 million in 2009.



**Under-five mortality rate**

"Millennium Development Goals." *Wikipedia*. Wikimedia Foundation, 15 Aug. 2014. Web. 17 Aug. 2014. <[http://en.wikipedia.org/wiki/Millennium\\_Development\\_Goals](http://en.wikipedia.org/wiki/Millennium_Development_Goals)>.

On this chart, we can clearly see where the greatest successes have taken place: in countries in Northern Africa and East Asia. Thanks to the report where this chart can be found (see Appendix), we are more precisely informed on the impressive successes made on the field and the countries concerned, mainly some of the poorest countries in the world, such as Bangladesh, Eritrea, Madagascar, Timor-Leste, Liberia, Bolivia, Ethiopia, and so on. In these countries, the under-five mortality rate has plummeted by 50 percent, sometimes more. These are some of the most extraordinary advances made and they reaffirm the incredible efforts made by mankind.

Although there have been successes, work still needs to be done to actually achieve the 4<sup>th</sup> Millennium Development Goal. As it stands, the goal is to obtain an under-five mortality rate of 4.14 million per year. The child mortality rate in 2012 was 6.6 million per year, thus efforts are still needed. As stated before, a majority of the causes of child-mortality, for instance measles, are preventable by vaccines. Consequently, vaccines and immunization occupy an important role within the accomplishment of the MDG 4. Through campaigns, regional interventions and substantial support by NGOs such as WHO and governments themselves, vaccines can be promoted further and the Goal can be achieved.

### **The importance of national commitment and vaccination efforts in international health**

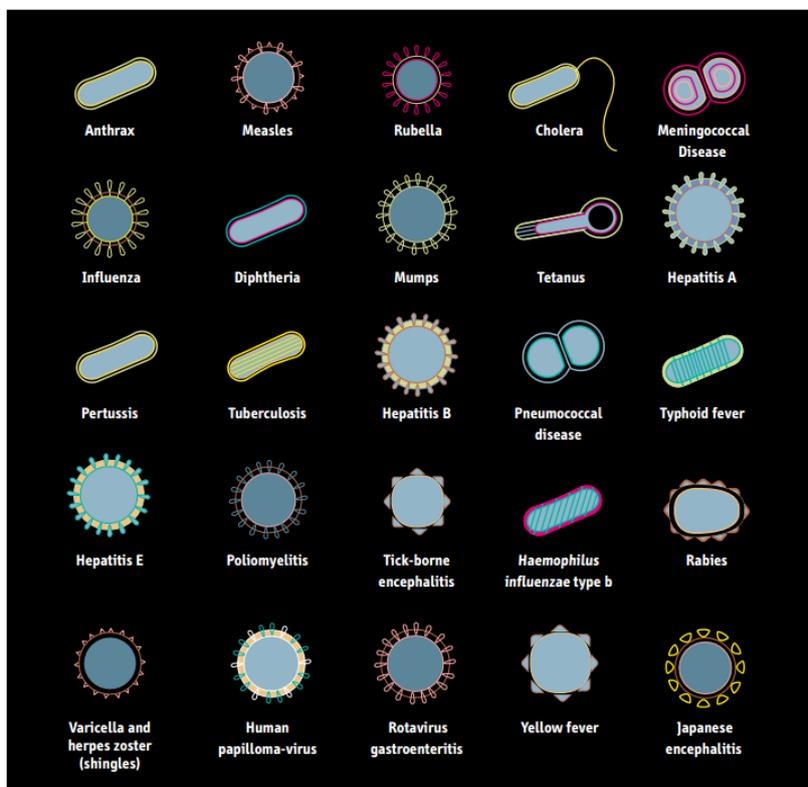
As preventable and treatable diseases do not know borders, vaccination efforts concern all the Member States and the different programs that are involved with disease prevention. Since the MDGs have been agreed upon by a majority of Member States, national commitment of all nations is crucial to achieve the objectives and aims fixed mainly by the Global Vaccine Action Plan, the Millennium Development Goal 4 and the Expanded Program on Immunization (see section “Evaluation of Previous Attempts to Resolve the Issue”) as quickly as possible. This national commitment expresses itself through ambitious yet realistic targets, financial support to organizations and health services, efficient vaccination campaigns and plans implemented in the national health systems. This is really important because of the fact that the United Nations, its different bodies and other Non-Governmental Organizations can simply not do all the work themselves. It is through a united movement of all nations that vaccination efforts can be promoted and implemented.

Besides the importance of national commitment to implement measures to support vaccination efforts, vaccines and immunization plans are important for international health. The reason for this is the fact that an increase of healthy people on the planet and the eradication of the most common diseases result in the protection of healthy future

generations. For instance, vaccines against rubella (German measles) are, among vaccines for numerous other diseases, important to assure international health. Rubella, a virus-borne disease, is usually mild and accompanied by fever and a rash. But if a pregnant women gets infected within the first three months of her pregnancy, there is a 85% chance that the baby born to the infected mother will have serious, sometimes incurable birth defects, such as heart malfunctions or deafness. Hence, vaccines can prevent the world's global population from getting infected by rubella or similar diseases, causing serious defects and sometimes death, and thus making sure that future generations are healthy and protected from or prepared to face such illnesses.

**The successes of vaccination efforts in recent years and the remaining goals**

More and more people each year have access to vaccines, and the use and development of vaccines has increased considerably. The regular and easy access to such products and their implementation into national health systems has led to the reduction of the incidence of various diseases. For instance, the number of deaths caused by vaccine-preventable diseases, such as diphtheria, measles, neonatal tetanus, pertussis and poliomyelitis have plummeted from 0.9 million in 2000 to around 0.4 million in 2010. Moreover, efforts are being



**The 25 diseases that can be prevented or controlled by vaccine**

"Global Vaccine Action Plan 2011–2020." Issuu. N.p., n.d. Web. 17 Aug. 2014. <<http://issuu.com/decadeofvaccines/docs/globalvaccineactionplan/19>>.

made to facilitate access to complex and expensive vaccines in regions where they are highly needed, and efforts are also being made on transport and delivery, reducing the time lapse of transport. Finally, the financing of vaccination efforts on a national and international level has improved. Strong and affordable systems have been put into place and have received help from important stakeholders.

According to data on immunization and vaccination released by the

United Nations in 2010, 154 out of the 193 Member States report having a specific budget for vaccination and immunization. More globally, national efforts supported by international assistance through, for example, the Global Immunization Vision and Strategy 2006-2015, have promoted and increased the implementation of measures to support vaccination efforts and to raise awareness on the importance of vaccination on a regional, national and international level. According to the Global Vaccine Action Plan (GVAP), there are 25 licensed vaccines that are being used to prevent or control 25 diseases, which can be found in the table above..

However, as we expose all the successes made thanks to the implementation, promotion and funding of vaccines, the goals that still need to be reached should not be forgotten. Firstly, there is a considerable difference between low-income countries and high-income countries when it comes to the adoption and implementation of new vaccines in their national health system. This creates a gap between LEDCs and MEDCs, leading to inequality and making the high-income countries progress faster towards the objectives set up concerning vaccinations. Following this is the problem of financial coverage, once again unequal in developed countries and in developing countries. In developed countries, substantially more vaccines are covered and by more means than in developing countries, where they do not have the means to assist their population when it comes to vaccines. Next, there is the problem of the access to medical services and accommodations between rural areas and urban areas, making it more difficult for rural population to have access and benefit from the vaccines implemented in the national health systems. Hence, the urban regions make advances while the rural areas fall behind. This inequality of medical services in urban and rural areas is another need that has to be satisfied to progress even more towards the implementation of measures to support vaccination efforts.

Yet, there is another problem that needs to be solved to facilitate the implementation of vaccines and thereby the implementation of measures to support vaccination efforts globally: the opposition against vaccines. Indeed, there is a certain part of the world's population that believes that vaccines are evil, a threat to health and that they should absolutely be avoided. This is mainly the case in Less Economically Developed Countries (LEDCs) and most of the time due to religious beliefs or the claim of individual liberty. For instance, in various African countries where religion, superstition and tribes are dominant, the implementation of vaccines and immunization programs is incredibly difficult as one cannot force another to be vaccinated, permitting the disease to persist, which might accelerate an epidemic. This opposition against vaccines is not only present in LEDCs but also in developed countries, such as in the United States of America. For the past several years, numerous families have made their case to Justice about vaccines and their dangers. These



families have seized the Autism Omnibus, a U.S. Court of Federal Claims, or other judicial institutions, to complain about the effects of vaccines on their children, claiming that vaccines caused autism or other dysfunctions. Although vaccines have been proven to be one of the most effective health measures of all times, these families persist and the anti-vaccine movement is not about to stop. Yet, as the majority of us think that vaccines are widely embraced by the world's population, not everyone seems to be convinced by its benefits, slowing down to a certain point the development and expansion of vaccines. Hence, these conflicts remain an important concern to be tackled.

More globally, even though great successes have been made on the field of the implementation of vaccines and the reduction or eradication of diseases, efforts still have to be made. The access to vaccines, medical services, accommodations and the programs put into place has to be made more equal between high-income countries and low-income countries, rich people and poor people, urban regions and rural regions. We have to be sure that every single person has equal access to vaccines and vaccine-related services. Hence, vaccination and its efforts have to be universalized.

## Major Parties Involved and Their Views

### World Health Organization (WHO)

As the issue at hand is closely related to health and well-being, the World Health Organization is the most important organization involved in the issue of vaccination efforts. Logically, its general point of view is to promote and implement vaccines on a regional, national and international level. Furthermore, it offers assistance and counseling to countries in need.

The role of the WHO on this particular issue is mostly characterized by its main role in the creation of the Global Vaccine Action Plan (GVAP) as well as the implementation of the Decade of Vaccines and other initiatives and programs. The WHO is present in many nations throughout the world and is constantly active in promoting vaccination efforts.

### United Nations International Children's Emergency Fund (UNICEF)

As vaccines are mostly administrated to young children, generally before they reach their fifth year, the United Nations International Children's Emergency Fund assists the World Health Organization with its actions on the field, mainly in developing countries, as well as with the elaboration and implementation of vaccine systems. UNICEF has mainly

collaborated with the WHO to attain the goal of universal vaccination through essential vaccines in order to vaccinate 80% of all children before 1990. UNICEF has worked with governments, international partners and other organizations to promote vaccines, create efficient cold chains and transport systems, and assure that governments implement vaccines into their health systems. Moreover, it is estimated that UNICEF provided vaccines for over 58% of children worldwide and collaborates with partners to assure low costs of vaccines while preserving good quality.

## Timeline of Events

Date	Description of event
May 1974	Initiation of the Expanded Program on Immunization (EPI);
1999	WHO created the Global Alliance for Vaccines and Immunization (GAVI Alliance);
2000	Adoption by the United Nations of the Millennium Development Goals (MDGs);
2006	Beginning of the Global Immunization Vision and Strategy;
2010	An estimated 109 million children under the age of 1 were vaccinated with three doses of the diphtheria-tetanus-pertussis (DTP3) vaccine;
2010	Reduction of global measles mortality of 74%, with 139,000 deaths in this year;
2011	90% of children were vaccinated against measles in 123 countries;
2011	1.5 million children died from diseases preventable by currently recommended vaccines;
2012	6.6 million deaths of children under the age of 5;
May 2012	Endorsement of the Global Vaccine Action Plan and beginning of the Decade of Vaccines;
2015	End of the Global Immunization Vision and Strategy;
2015	Deadline of the MDG 4, "reduce by two thirds, between 1990 and 2015, the under-five mortality rate";
2020	End of the Global Vaccine Action Plan and of the Decade of Vaccines;



## UN involvement, Relevant Resolutions, Treaties and Events

The following list of events clearly shows the actions of the UN and its related bodies' involvement.

- The Global Vaccine Action Plan (GVAP), endorsed during the 65<sup>th</sup> the World Health Assembly on the May 25<sup>th</sup>, 2012;
- The Decade of Vaccines, adopted during the 65<sup>th</sup> World Health Assembly and created by the GVAP in 2012;
- Beginning of the Expanded Program on Immunization, initiated by the World Health Organization in May 1974;
- Creation of the Global Alliance for Vaccines and Immunization (GAVI) by the World Health Organization in 1999;

## Evaluation of Previous Attempts to Resolve the Issue

As the issue at hand is complementary to the Millennium Development Goal 4, “reduce child mortality”, the measures implemented within this MDG are very often in accordance with the concern of vaccination efforts. Generally, vaccines are administered to young children before the age of 5. Hence, the actions undertaken in the context of MDG 4 have led, although sometimes indirectly, to the implementation of measures to support vaccination efforts. These actions include education of local healthcare workers, financial assistance through the MDG-Fund, various immunization programs (for instance in Chad), targeting the weaker regions, facilitating access to primary healthcare services, and so on.

Moreover, within the concern of vaccination efforts, the Global Vaccine Action Plan (GVAP) is another considerable attempt to resolve the issue. Approved by the World Health Assembly, the plan aims to achieve the objectives and vision of the Decade of Vaccines, fixed from 2011 to 2020. As stated by the GVAP, its mission is to “improve health by extending by 2020 and beyond the full benefits of immunization to all people, regardless of where they are born, who they are, or where they live.” The five objectives fixed by this Plan are:

1. Achieve a world free of poliomyelitis;
2. Meet vaccination coverage targets in every region, country and community;
3. Exceed the Millennium Development Goal 4 target for reducing child mortality;



4. Meet global and regional elimination targets;
5. Develop and introduce new and improved vaccines and technologies;

These objectives are consistent with the issue of promoting vaccination efforts globally and what is done within these objectives works in the same perspective of implementing measures to promote vaccination efforts globally.

The third substantial attempt to resolve the issue is the Expanded Program on Immunization (EPI). Implemented by the World Health Organization (WHO), its central aim is to make vaccines available to all children in the world. This program works through the creation and implementation by governments of policies for vaccination, following the rules and guidelines of the EPI. The creation of such a project contains many complex elements and needs reliable transport, maintenance, training, monitoring and raising awareness through education and documentation. Since its implementation in 1974, the efforts made for this program have been important and successful. However, the universal availability of vaccines is not yet achieved and plenty of work and effort is still needed.

Finally, the fourth considerable attempt to implement measures to support vaccination efforts is the creation by the World Health Organization (WHO) of the Global Alliance for Vaccines and Immunization (GAVI), better known under the name of the GAVI Alliance. GAVI states: "22.6 million children in developing countries do not receive life-saving vaccines that parents in wealthy nations take for granted. GAVI exists to redress this inequity." During its first conference, held in London in 2011, the GAVI Alliance set up a five year agenda focused on the assistance of developing countries on the field on vaccination and immunization to vaccinate another quarter of a billion children by 2015 and potentially save four million additional lives. Hence, the actions of the GAVI Alliance are mainly turned towards the poorer populations and facilitating their access to vaccination and immunization.

## Possible Solutions

The possible solutions on the issue at hand are broad and diverse and they all need to be exploited in order to deliver a strong, varied and consequent response to the concern of implementing measures to support vaccination efforts globally.

First, a solution that could be implemented is the reduction of all the differences that persist between high-income countries and low-income countries, rich people and poor people, urban areas and rural areas. Concerning the first disparity, a solution could be to

accord more attention to the low-income countries in terms of vaccines and health programs to boost the successes, improve the situation and help them to catch up with the high-income countries, without thereby ignoring the high-income countries or put a hold on their advances. Concerning the disparity between rich people and poor people, a solution could be the creation of a funding system especially dedicated to people with low incomes. The definition of low income and the people that could benefit from this funding system should be defined. This should promote vaccination efforts towards the poorer half of the world's population. Finally, concerning the difference between urban and rural regions, a solution could be, once again, to favor the rural, disadvantaged regions in vaccination programs when it comes to the construction of new medical centers.

Second of all, to assure the successful future of vaccination efforts, vaccines need to be universalized. Every single person on earth, regardless of his or her income, social status, geographical location, skin color or any other criteria, should have the same access to vaccines and immunization programs. This could be achieved through the creation of an independent body that is focused on the defined priority and high-priority regions to make the access to vaccines more equal. This will assure more equal advances and avoid gaps between different regions, countries or people.

Third, the creation of a transparent international database should be considered. This database would be accessible to everyone and would serve to piece together a precise image of the state of the different vaccines in the world, the diseases that remain untackled, and the advances made. This would help avoid the repetition of research or actions, making efforts more efficient as it gives a clear and well-organized image of the state of vaccination at any given point. However, this solution shouldn't be considered as the most effective and the previous solutions should be considered first.

Last, careful thought should be given to the funding and financial assistance needed when implementing solutions to tackle the problem. The options are varied, but one of the most important stakeholders for this is the World Bank. This organization has provided substantial financial assistance to both the World Health Organization and to its programs and initiatives, as well as to UNICEF during the past years.



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*Www.childmortality.org*. Child Mortality Estimates. Web. 03 July 2014. <<http://www.childmortality.org/>>.

## Appendix or Appendices

- I. [http://mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress2010/2010\\_Addendum\\_Goal4.pdf](http://mdgs.un.org/unsd/mdg/Resources/Static/Products/Progress2010/2010_Addendum_Goal4.pdf)

This document is important within the Millennium Development Goal 4 as it adds extra information concerning the Goal and gives as well more information on the advances already made. Concise yet precise, this document should not be ignored and is very helpful when trying to understand the global concern.

- II. [http://whqlibdoc.who.int/hq/2005/WHO\\_IVB\\_05.05.pdf](http://whqlibdoc.who.int/hq/2005/WHO_IVB_05.05.pdf)

This document, published by the World Health Organization, lays down the principles, framework and strategic areas of the Global Immunization Vision and Strategy (GVIS), from 2006 to 2015.

- III. [file:///C:/Users/Ivo%20Bakker/Desktop/Downloads/9789241504980\\_eng.pdf](file:///C:/Users/Ivo%20Bakker/Desktop/Downloads/9789241504980_eng.pdf)

In this document can be found everything concerning the Global Vaccine Action Plan (GAVI) as well as other crucial information on the topic of vaccines. This document should be read carefully and well exploited for the upcoming debates.



- IV. [http://www.who.int/immunization/global\\_vaccine\\_action\\_plan/GVAP\\_Goals.pdf?ua=1](http://www.who.int/immunization/global_vaccine_action_plan/GVAP_Goals.pdf?ua=1)

This document briefly summarizes the 5 different goals of the Decade of Vaccines, held from 2011 to 2020.

- V. [http://www.childmortality.org/files\\_v16/download/UNICEF%202013%20IGME%20child%20mortality%20Report\\_Final.pdf](http://www.childmortality.org/files_v16/download/UNICEF%202013%20IGME%20child%20mortality%20Report_Final.pdf)

As child mortality plays an important role within this particular issue, this document is substantially important as it delivers a clear, interesting and well-structured idea of the state of child mortality worldwide through different studies on the field and statistics.

- VI. [http://whqlibdoc.who.int/publications/2009/9789241563864\\_eng.pdf?ua=1](http://whqlibdoc.who.int/publications/2009/9789241563864_eng.pdf?ua=1)

In this document published by the World Health Organization, we are clearly informed on the state of vaccines throughout the world, the advances made, the goals that still need to be achieved, the geographical regions where the situation is the most alarming, etc. Within this issue, this document is crucial and absolutely needs to be read.

