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Vaccines Work ^[1]

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#VACCINESWORK TO SAVE LIVES

An estimated **2-3 million deaths** are prevented every year.



#VaccinesWork

World Immunization Week is celebrated during the last week of April and its purpose to protect people of all ages against preventable diseases through the use of vaccines. #VaccinesWork is this year's theme.

A vaccine is any preparation given (administered through an injection, a nasal spray, or orally) for the purpose of generating immunity against a disease. Immunity is obtained by stimulating the production of antibodies; when we generate specific antibodies against a virus, the disease is fought off faster or a subsequent infection is prevented. Through vaccines, science has succeeded in promoting the production of antibodies to prevent some diseases and their

consequences before we become exposed to them. There are diseases with consequences that are too serious to simply leave our bodies to "adjust" and fight it off, as we might do with a common cold.

Today, more than one million children die every year from pneumococcal disease or diarrhea caused by the rotavirus, even though vaccines exist against these diseases. Other diseases such as tetanus, measles and haemophilus influenzae b can also lead to death, but we have vaccines to prevent them. Vaccination is recognized as one of the most successful and cost-effective health interventions. Measles mortality, for example, has declined from 535,000 estimated world-wide deaths in 2000 to 139,300 in 2010, thanks to the intensification of vaccination campaigns. However, according to statistics from the World Health Organization (WHO), more than 19 million children remain unvaccinated or are insufficiently vaccinated today. In May 2012, the Global Plan of Action on Vaccines was adopted at the World Health Assembly with the aim of preventing millions of deaths by the end of 2020, through universal access to vaccination. However, being only 3 years away from our goal, we still have a long way to go.



1. Vaccines are safe and effective.

Any licensed vaccine is rigorously tested before it is approved for use, regularly reassessed and constantly monitored for side effects. In the rare event a serious side effect is reported, it is immediately investigated.



In Puerto Rico, the issue of access to vaccination is still not settled. At the end of 2015, the Office of the Comptroller of Puerto Rico published a Special Report of the audit done to the Department of Health to answer the question: "Do children and adolescents in Puerto Rico have accessibility to vaccination services?" (You can access it [here](#) [3].) Some of the statements made by the report are as follows:

- The Vaccination System is not effective in providing access to vaccination services to private patients under the age of 18.
- Private insurers are not compliant with coverage of the recommended vaccination services without co-payment, as required by Law 194-2011, Puerto Rico Health Insurance Code, affecting patients with private insurance.
- The Vaccination Division has not been effective in monitoring the compliance of private providers, schools, and other centers with the registration of immunization information in the

Puerto Rico Immunization Registry (PRIR).

This last point refers to the digital vaccination record in Puerto Rico, which is used by the



2. Vaccines prevent deadly illnesses.

Vaccination protects children from diseases like diphtheria, measles, mumps and pertussis (whooping cough). Failure to vaccinate leaves children and adults vulnerable to diseases, complications or even death.

access your immunization records online [4]. At the same time, it is difficult to apply for certain federal and state services in Puerto Rico.

3. Vaccines provide better immunity than natural infections.

The immune response to vaccines is similar to the one produced by natural infection but less risky. For example: natural infection can lead to cognitive impairments from *Haemophilus influenzae* type b (Hib), birth defects from congenital rubella infection or irreversible paralysis from polio.



services for students, and limits our ability to meet CDC

requirements and WHO recommendations.

Other factors also reduce the positive effect we might have through vaccination, even for those who have access to it. There is still a great deal of misinformation about vaccines, which promotes their fear and rejection.

In a study published in 2015, the authors report that according to data from the Department of Health, vaccination against Human Papilloma Virus in Puerto Rico was only 17% *. And we're talking about a vaccine that could prevent several types of cancer! It's necessary to combat fear with education. Because of this, organizations like VOCES [4] (which translates to "voices"), the Puerto Rico Vaccination Coalition, work hard to educate legislators, health providers, community leaders, and the general public about the importance and safety of vaccination. In addition, they seek to make vaccination more accessible to all.

Here is a fragment from the message that the President of VOCES, Lilliam Rodríguez, issued in honor of this week:

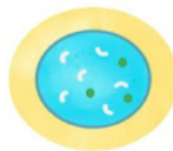


4. Combined vaccines are safe and beneficial.

Giving several vaccines at the same time has no negative effect on a child's immune system; reduces discomfort for the child; and saves time and money. Children are exposed to more antigens from a common cold than they are from vaccines.

5. If we stop vaccination, diseases will return.

Even with better hygiene, sanitation and access to safe water, infections still spread. When people are not vaccinated, infectious diseases that have become uncommon – diphtheria, measles, mumps and polio – quickly reappear.



World Health Organization



Check with your doctor that you are fully vaccinated.

"Today we continue with the Campaign to educate

and confirm that all studies based on scientific evidence confirm that vaccines are safe and effective! I want to invite you to share our posts this week and make our VOICE heard. The success of vaccines today is our greatest challenge because not seeing these diseases that we are preventing, lead some today to believe they are not necessary anymore. I invite you to help us spread this campaign and join us in celebration of our 5th Anniversary as an organization with the Hashtag #VaccinesAreSafeAndEffective #Ibelieveinvaccination and upload your photo. I'm counting on you."

Much remains to be done to ensure universal access to vaccination, but we can begin by educating others about its importance. If you want to join the awareness campaign, you can find images to share on the [WHO](#) [5] page and follow [VOCES](#) [6] by twitter and facebook.

If you have any doubts about the benefits of vaccination, your safety, or what vaccines could benefit you, don't hesitate to talk to your doctor!

Additional references:

Comptroller's Report: <http://senado.pr.gov/Informes%20de%20Agencias/8127%20DA-16-07.pdf> [3]

VOCES: <http://vocespr.org> [6]

OMS, vacunas: <http://www.who.int/topics/vaccines/es/> [7]

OMS, semana de inmunización: <http://www.who.int/campaigns/immunization-week/2017/event/es/> [8]

Romaguera J, Caballero-Varona D, Tortolero-Luna G, Marrero E, Sua?rez E, Pe?rez CM, et al. Factors Associated with HPV Vaccine Awareness in a Population-Based Sample of Hispanic Women in Puerto Rico. J. Racial and Ethnic Health Disparities (2016) 3:281–290 DOI 10.1007/s40615-015-0144-5*

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<https://prir.salud.gov.pr/PRIRPRD/clientSearch.do;jsessionid=0a01134430d88a9c1389fbbe450198d5beaf7d367f80.e38>

[5] <http://www.who.int/campaigns/immunization-week/2017/infographic/en/> [6] <http://vocespr.org> [7]

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