

Improved management of Zika virus in Puerto Rico through health literacy ^[1]

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October is Health Literacy month. Join our effort and share this information!

Health literacy refers to the capacity of an individual to obtain, process, and understand basic information regarding their health in order to make the most appropriate health-related decisions. This knowledge may define the individual's concerns about preventive measures, treatment outcomes, relevant costs, or any other related issue.

The spread of the Zika virus and its consequences are a clear example of how, in some cases, the lack of literacy can define how we deal with these situations. Examples that influence the decision-making capacity include but are not limited to the lack of information and educational tools and misinformation being communicated by unreliable sources.

Over 25,000 cases have been documented in Puerto Rico in 2016 according to the CDC, but the Zika virus is not new. It was first detected in Uganda in 1947 and cases have been documented throughout the years. The virus is spread by the *Aedes aegypti* mosquito, which is also responsible for spreading dengue fever. Not only is the virus transmitted via a mosquito, but it can also be transmitted by sexual contact. There is evidence that men can carry viral loads in their semen weeks after infection.

This Zika virus can lead to many complications, such as Guillain-Barre syndrome and fetal complications during pregnancy. Nevertheless, information regarding the basics about Zika fever, its common complications, and/or prevention methods have not been discussed in the media as much as information regarding potential yet not so common complications. For example, even though microcephaly cases by gestational Zika virus infection are known, complications such as intrauterine growth restrictions for fetuses, fetal death and additional central nervous system complications have been found to be more prevalent in certain populations such as a report conducted by the *New England Journal of Medicine* in the pregnant women population in Río de Janeiro (Brasil et al., 2016). Nonetheless, as this is a new disease in our population, there is much to be learned regarding future outcomes.

Education regarding protection from mosquito bites and sexually transmitted diseases is fairly common in Puerto Rico. Local agencies have been promoting prevention through TV ads, the internet, and in public activities. Still, these must be improved in order to target a broader audience, including workplaces and educational institutions. The lack awareness and adequate prevention, in addition to delays in seeking advice from a health care professional, result in a higher incidence of cases, many of which are easily preventable. Consequently, as an initiative to promote health literacy during the month of October, we aim to create awareness on the prevention of Zika, its negative impacts and how to manage them appropriately.

Symptoms such as red eyes, fever, joint pain, and rash could be indicative of Zika transmission. If you experience any combination of these symptoms we encourage you to immediately visit your primary physician. It is important to use repellents, avoid stagnant water sources, and mosquito infested places. In cases of pregnancy, women should be even more careful, especially preventing mosquito bites, since there has been strong evidence linking Zika infection with several fetal complications, as described above.

For the sexually active, remember to use protective barriers such as condoms since there is a risk of sexual transmission of the virus. Any person with an acute onset of limb tingling, muscle weakness and/or difficulty walking should seek medical attention at once since this might be indicative of Guillain-Barre Syndrome.

Proper education by health officials and agencies can improve outcomes, avoid unnecessary panic, and encourage proper decision-making in the population. Health literacy allows people to manage their own health effectively. The *Determinants of Health Literacy* model (Pawlac, 2005) takes into consideration multiple aspects that affect an individual's health outcome. The model is divided into four aspects:

- It starts by matching the level of care with the patient's need; people must understand that seeking primary attention is necessary at the onset of symptoms.
- Effective communication between patient and provider is key. Patients must understand the cost of treatment, which promotes proper preparation in case of falling to illness and being

an incentive for prevention.

- Additionally, the mismanagement of a health condition can be an economic burden for affected individuals, due to treatment costs and days of work lost.
- Lastly, treatment compliance is essential.

In this sense health illiteracy and its consequences can also be a burden for Puerto Rico's economy. Moreover, an informed consumer might have a better understanding as to what he or she is getting in terms of their treatment. Prevention should be prioritized, since it helps to avoid complications, limits excessive costs and, more importantly, can improve outcomes.

Communication between the population and health care agencies as well as the patient-physician communication are key in increasing health literacy rates. Increased health literacy will result in improved well-being in the general population, reduce the burden of disease on the country's economy, and also decrease healthcare costs to individuals as well as to the Department of Health and other health-related programs and agencies.

Our educational process needs to include more information regarding general health knowledge, trustworthy sources of information, and current issues with relevant information such as the Zika virus. To quote the US Surgeon General, Vivek Murthy: "We will combat misinformation with clear communication".

This is the second Zika-related post in "Conocimiento: A tu Salud". For more info on Zika, refer to our previous article [What is the Zika virus?](#) [3].

Sources:

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