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Peru : Zika Virus

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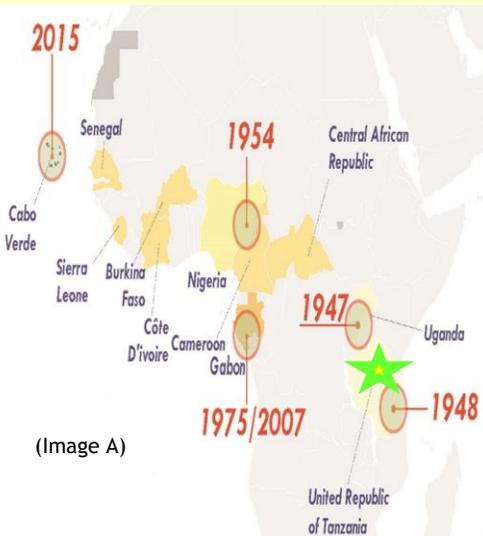
ZIKA VIRUS IN PERU

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Ben Martin

Peru

When & Where Did Zika Start



(Image A)

What is a public health issue?

An issue becomes a public health issue when it includes these four factors. Problems occur widely / frequently. Problem produces significant death or injury to populations. Effective methods for interventions exist. Interventions must be acceptable in target population.

Signs and symptoms

People with Zika virus disease can have symptoms including mild fever, skin rash, red eyes, muscle and joint pain, and headache. These symptoms normally last for 2-7 days (WHO, 2016).

Peru is a South American coastal country (See image C). Peru has a population of 31,777,000 (World Bank, 2017). Its population consists mostly of the ethnicity of Amerindian and Mestizo, which is a term used to describe people of Latin America who have mixed ancestry with European descent (Gonzalez-Barrera, 2015). The religion of Peru is Roman Catholic; this does not mean everyone in Peru is a Roman Catholic though. The country is governed by a unitary state and semi presidential representative democracy republic with a multi-party system (Chepkemoi, 2017). This means that the people directly elect the president, which is slightly different than the American representative take on elections. They also elect a congress in a similar way. Both 130 members of congress and the president serve five year terms.

Peru is a largely underdeveloped country that struggles with a changing environment and largely informal economy. Peru is home to a large majority of the world's tropical glaciers. It is also in the zone where Earth is warming drastically. Its glaciers are melting, which provide drinking water, energy, and agriculture. The other large problem Peru faces is poverty and wealth distribution. This can be seen to increase their informal economy which is an economy taking place illegally. "According to the World Bank, a citizen of Lima earns 21 times more than a resident of the outback, where the rural poverty rate is a staggering 54 percent" (Arana, 2013). This poverty causes public health distress due to lack of: healthcare, fresh water, food, and education.

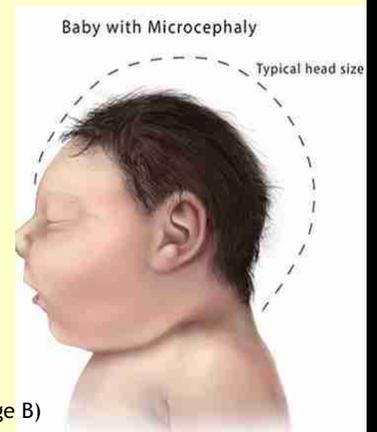
In the face of a virus such as Zika Peru is dangerously underdeveloped and will need to be careful.

What is Zika Virus?

Zika was first discovered in the country Uganda in 1947. (See image A) It is named after a forest in Uganda. In 1952 the first case of Zika was documented and since then Zika has been spreading (Bragazzi et al 2017). See image A for how it spread across Africa. Now Zika has spread to Peru, a middle class country with a poor education system and healthcare system.

Zika is a virus that is acquired most commonly through a mosquito bite. It can also be transferred from mother to fetus and through sex. Zika does not normally cause someone to get sick enough to need hospitalization and has rarely killed persons (WHO, 2016). One reason why Zika is such a worrisome public health issue is because of its impact on babies. Babies who contract Zika have had severe health defects. The babies' heads and brains do not develop properly

causing microcephaly (see image B). They also may suffer from decreased brain tissue, damaged eyes, joint problems, and too much muscle causing restricted movement. These symptoms are known as congenital Zika syndrome (Mlakar et al, 2016).

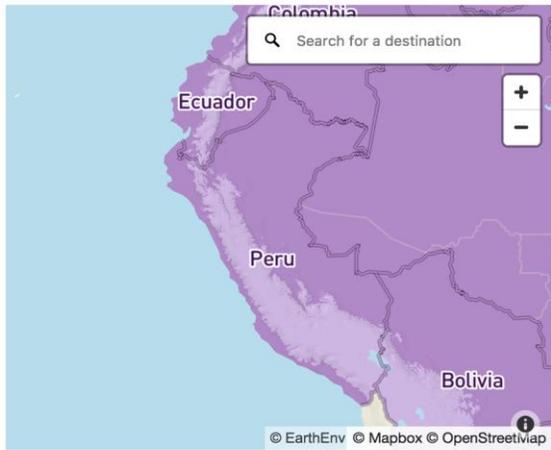


(Image B)

Peru Facing Zika

Image D (bottom left) shows how many confirmed and suspected cases of zika there have been in Peru. Peru has 25 departments where zika is reported to. It has come up in 11 of those districts. Zika coming up in places like the capital, where a large portion of the nation's people live. In Image D an increase in cases can be seen in the EW 38 of 2016 where the city of Iquitos had an outbreak. "The National Epidemiology Center, Disease Prevention and Control at the Ministry of Health perform Zika virus surveillance" (WHO, 2017). All health facilities in the country are watching for zika and cases of microcephaly. A handful of the departments follow National Institute of Health surveillance for early detection. Cases are identified in laboratories. There are weekly updates on their website and information is frequently communicated to the World Health Organization(WHO, 2017).

Challenges facing Peru with zika virus ride on the back of previously stated problems of poverty, lack of education, and inadequate health care. On top of this, Peru is a dangerous place for zika virus to be because the mosquitoes can inhabit most of Peru's land. There is not enough information to say what groups are most impacted by zika in Peru because it is such a recent problem. It can be concluded that those who are mostly likely to be infected are those who do not adequately protect their skin from mosquitoes and people who have unprotected sex.



Areas with Risk of Zika
 ■ Areas with risk of Zika infection (below 6,500 feet)*
 ■ Areas with low likelihood of Zika infection (above 6,500 feet)*
 ■ Areas with no known risk of Zika infection

*Mosquitoes that can spread Zika usually live in places below 6,500 feet. The chances of getting Zika from mosquitoes living above that altitude are very low.

(Image C)

My solution

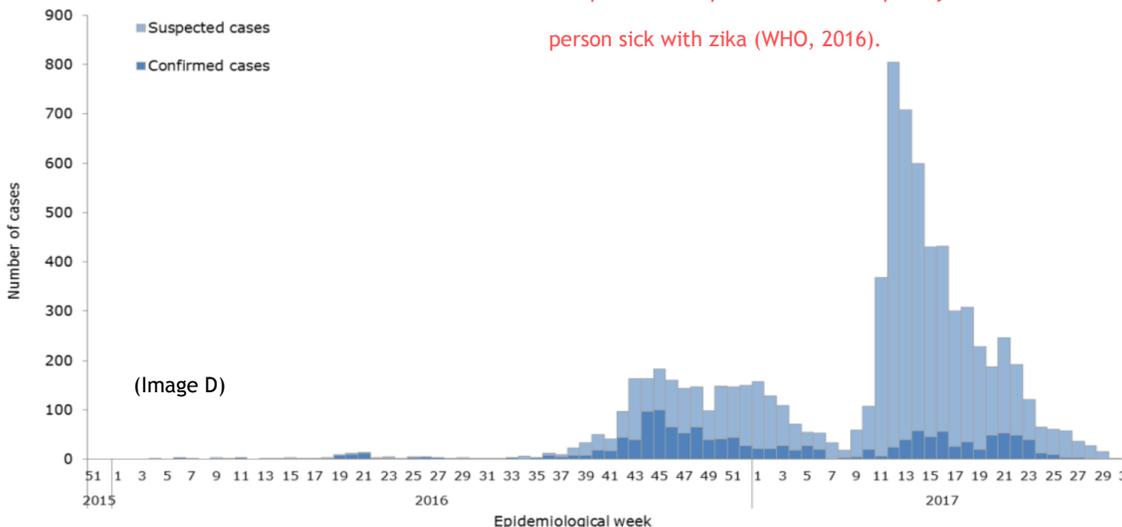
Groups have previously dealt with mosquito borne disease with things such as chemicals, for example insecticides or larvicides (WHO, 2009). It is also standard to educate the public on how the disease is contracted and what symptoms and outcomes are.

My solution to the problem in Peru is asking for more than education and containment of the disease. I think Peru would be best off not using any chemicals like insecticides because they are shown to be harmful to natural environments and cause pest resistance. I agree that education on the matter is key. There needs to be more than just education on behalf of the Peruvian Government. There needs to be nationwide reforms on occupational and educational reforms. Peru's large informal economy leaves many working as illegal workers and allows

money to be untaxed. Allowing more occupations to be legal would allow for the government to have more money to spend on education and health care. More spending in these areas would make Peru safer in the face of public health issues. My solution is a more indirect way of dealing with zika virus than currently taking place in Peru but is necessary for the future of the country.

Treatment

There is no specific medicine for zika virus in adults. It should be treated similar to the flu, with rest and lots of fluids. Medicine such as Tylenol can help to reduce fever and pain. It is important to clean up body fluids of a person sick with zika (WHO, 2016).



(Image D)

Source: Data provided by the Peru Ministry of Health and reproduced by PAHO/WHO^{1,2}

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