**Climate Change and Health**

 Water has usually been identified as the major reason why the earth has the ability to support life. Its importance is seen in the migration of humans and other living organisms as well as its impact on plant life. One of the impacts of climate change will be disruption of the water cycle. Some areas will experience its shortage while others will be oversupplied. Both extremes will have effects on humans’ health. Cholera and malaria are two health concerns that can be directly related to the impact of global climate change on water supply. The two, however, have different impacts on various geographical regions.

 The chances of contracting cholera are high in some areas and are linked to the shifts. Increased warmth results in melting of glaciers which are usually found in mountains and directly affect the amount of water in some rivers. Once these masses are gone, the rivers dry up causing previously irrigated and vegetated areas to turn arid. A shortage of clean drinking water forces the inhabitants of these areas to neglect hygiene and use contaminated water ("General Information | Cholera | CDC", 2018). *Vibrio cholerae*, the responsible bacterium thrives in such conditions and once a single individual is infected, everybody using the water is at risk. Those living in crowded cities and villages suffer the most.

 The climatic effects that promote increased malaria risks are opposite to those enhancing cholera. Warmer atmospheres can hold more water particles than cold ones which upon cooling, results in increased rainfall. The increased water in catchment areas like dams and ponds as well as in empty containers near residential areas provides good breeding ground for mosquitoes which suck human blood and transmit the disease (del Prado et al, 2014). Despite being incommunicable, the disease can be transferred by the exchange of blood, which can be indirectly done by the female Anopheles mosquito. This means that persons living in prone areas are still at risk due to the increase in the number of the insects.

 In the United States, cases of cholera are rare with only about 6 reported every year. However, it has been found that people traveling to and from West Indies, as well as Haiti, are at a great risk. In comparison, developed countries reported similar trends while developing ones are greatly affected. In Germany for instance, the few cases reported resulted from individuals returning from other countries (Slesak et al, 2016). The case is different in the Dominican Republic where outbreaks have been reported to claim a dozen lives as recently as 2011.

 Developed countries also report few cases of malaria in comparison to their developing counterparts. The United States has been successful in combating the disease in the past six decades. The country, however, invests large amounts of funds and human resource in research and treatment (Winskill et al, 2017). In Canada, about 560 cases have been reported annually for the past decade. However, developing countries are the most hit. In 2013, about three million Ghanaians were reportedly diagnosed, about an eighth of the population (Boadu et al, 2016). Malaria accounted for over a third of hospital visits with the whole country at risk of infection.

 Nurses can play a major role in combating cholera. This can be done through volunteering to offer treatment services in affected areas, educating residents about the risks through humanitarian initiatives, and lobbying for authorities to improve living standards and increase fund allocation. Administrations of antibiotics, vaccination, as well as performing rehydration aid are the major activities that health officers can engage in while serving the affected patients. One can contribute by joining projects organized by bodies like WHO and CDC. Courses are available where one can learn how to handle large groups of patients in foreign countries (Williams & Downes, 2017). Engaging in campaigns that call for clean water provision can also have a great impact in preventing future outbreaks.

 With the great success achieved in the US in the fight against malaria, nurses can help replicate similar results in other countries as well. The main prevention strategies involve keeping the patients from mosquito bites. Sub-Saharan Africa has witnessed many nurses led initiatives that provide sleeping nets and educate residents on the need to maintain clean surroundings (Winskill et al, 2017). The President’s Malaria Initiative is the best example of these programs and has been in operation for over a decade. Locally, nurses can participate in prescribing antimalarial drugs to individuals, especially those visiting the prone regions.

 Developing countries are experiencing more severe effects of malaria and cholera as compared to their developed counterparts. While climate change affects all nations equally, it seems like changes in the water supply and precipitations are affecting the world in an unbalanced manner. Every nation, however, has a role to play since the effects eventually spill over from the heavily affected parts to the rest since people have to travel. While conserving the environment is the most important activity in reducing the two health risks in the long-term, short-term emergencies have to be immediately addressed, and nurses have an important role in both.

**References**

Boadu, N. Y., Amuasi, J., Ansong, D., Einsiedel, E., Menon, D., & Yanow, S. K. (2016). Challenges with implementing malaria rapid diagnostic tests at primary care facilities in a Ghanaian district: a qualitative study. *Malaria journal*, *15*(1), 126.

del Prado, G. R. L., García, C. H., Cea, L. M., Espinilla, V. F., Moreno, M. F. M., Marquez, A. D., ... & García, I. A. (2014). Malaria in developing countries. *The Journal of Infection in Developing Countries*, *8*(01), 001-004.

General Information | Cholera | CDC. (2018). Retrieved from <https://www.cdc.gov/cholera/general/index.html>

Slesak, G., Fleck, R., Jacob, D., Grunow, R., & Schäfer, J. (2016). Imported cholera with acute renal failure after a short business-trip to the Philippines, Germany, October 2015. *Eurosurveillance*, *21*(1).

Williams, H., & Downes, E. (2017). Development of a course on complex humanitarian emergencies: preparation for the impact of climate change. *Journal of nursing scholarship*, *49*(6), 661-669.

Winskill, P., Slater, H. C., Griffin, J. T., Ghani, A. C., & Walker, P. G. (2017). The US President's Malaria Initiative, Plasmodium falciparum transmission and mortality: A modelling study. *PLoS medicine*, *14*(11), e1002448.