THE IMPACT OF WATER AND SANITATION ON CHILDHOOD MORTALITY IN NIGERIA

Essi Oghenerhioborue Larry  
student of the 3rd year Faculty for the International Students

Scientific supervisor – Associate Professor E.A. Moiseenok
Department of General Hygiene and Ecology
Grodno State Medical University

Relevance: In Nigeria, approximately 109 million people lack access to sanitation facilities and water, respectively.

Aim: The article is aimed to show the impact of water and sanitation on children especially under 5 years old without access to improved water and sanitation facilities who are at higher risk of death in Nigeria.

Materials. In 2003, 2008 and 2013 studies in Nigeria Demographic and Health Survey data were used to examine the impact of water and sanitation on deaths of children aged 0–28 days, 1–11 months, and 12–59 months using Cox regression analysis which is a model that produces a survival function that predicts the probability of an even which occurs. Survival information of 63,844 children was obtained, which included 6,285 deaths of children under 5 years old; there were 2,254 cases of neonatal mortality (0–28 days), 1,859 cases of post-neonatal mortality (1–11 months) and 2,172 cases of child mortality (1–4 years old). Over a 10-year period, the odds of neonatal, post-neonatal and child deaths significantly reduced by 31%, 41% and 47% respectively. The risk of mortality from both unimproved water and sanitation was significantly higher which invariably shows the serious significant effect of drinking contaminated water. So therefore, the Nigerian government needs to invest more in water and hygienic sanitation to reduce preventable child deaths.

Results and discussion. Access to unimproved water and sanitation among children under 5 years old is a serious public health problem in many developing countries, including Nigeria. Globally, it has been estimated that nearly a billion people still lack access to improved sources of drinking water, and about 2.5 billion lack improved sanitation. Unimproved water and sanitation are major causes
of diarrhea, cholera etc. which globally accounts for approximately 1.4 million child deaths each year. The majority of these deaths occur in sub-Saharan Africa where nearly half the population lacks access to improved water and hygienic sanitation. Children are more vulnerable to the health hazards associated with unimproved water supply and hygienic sanitation; their immune, respiratory, and digestive systems are still developing, and children play in areas where contaminants may accumulate.

The impact of unimproved water and sanitation as a leading cause of childhood "diarrhea" has long been recognized and documented in the public health literature in Nigeria. In response to this, in the past two decades the Nigerian government has launched and implemented the National Water Supply and Sanitation Policy, which can help ease the alarming condition concerning the childhood mortality. Despite all these initiatives, a different report global progress on sanitation and drinking water indicates that approximately 109 million people in Nigeria still lack access to basic sanitation facilities and improved drinking water, respectively. And past studies have shown that access to improved water and sanitation leads to a reduction in childhood mortality as well as child diarrhea and also cholera respectively. A recent large cross-sectional study undertaken in 38 developing countries concluded that access to improved water and sanitation can reduce child mortality by approximately 20%, and each year it will prevent about 2.2 million deaths in children aged less than 5 years old from low-income and middle-income countries.

The number of people with access to improved water and sanitation in Nigeria is very low, particularly in rural areas (48% for water and 28% for hygienic sanitation), and could be one of the reasons why Nigeria still has the highest reported number of childhood deaths in Africa. Each year in Nigeria, approximately 150,000 children under 5 years old, die from diarrhea.

*Case Report of Diarrhea Outbreak in the City of Lagos, Nigeria.* Approximately Thirty (30) children have died after a fresh outbreak of diarrhea in Lagos, a state in southwestern Nigeria. Such outbreaks are relatively common in Nigeria, where the serious lack of access to safe water creates widespread public health challenges.

As World Water Day approaches, the deadly outbreak brings a focus to the critical issues of water and sanitation facing Nigerians. 57 million people in Nigeria do not have access to safe water. Nigeria also accounts for 9% of under-five deaths worldwide. Globally, over 315,000 children die each year from diarrheal diseases caused by unclean water and poor sanitation. In addition, Nigeria’s rapid urbanization poses a critical threat to the country’s already-strained resources. Nigeria is expected to surpass the United States to become the third most populous nation in the world by 2050. This projection, in combination with Nigeria’s infrastructural instability, adds to the urgency to eliminate childhood deaths as a result of water-related diseases. Part of the problem in Nigeria is the largely privatized and commodified nature of water in Nigeria. Privately-owned pipelines only reach a small fraction of the population, leaving the rest to find water from unsafe sources like streams and uncertified boreholes. Moreover, the sale of clean water through private vendors creates additional pressures on the
water distribution system. Vendors sell water for as much as double the purchase price they paid at various boreholes, and most Nigerians cannot afford the premium on usable water. They then turn to streams and ponds, which are often fed by sewage-ridden water sources.

There are challenges on the political level as well. The three tiers of government – federal, state, and local – share responsibility over water resource management. This inefficiency results in unsuccessful government-led initiatives to secure clean water and adequate sanitation for Nigerians. Though programs like SHAWN, led by UNICEF, have helped bring latrines to communities and have helped reduce or eliminate open defecation in these communities. Despite these efforts however, Nigeria made weak progress over the past 15 years of development. And on my own opinion concerning this it is due to the high rate of corruption in Nigeria Government. The people aren’t corrupt but the government is highly corrupt which affects all system in Nigeria and this is what the government will not speak about even revenues that are suppose to be meant for the hygienic sanitation in Nigeria it won’t be sufficient because of embezzlement of the governmental personnel in that sector but nevertheless thanks to UNICEF.

**Conclusion.** The above picture clearly shows the unhygienic condition of where some Nigeria drinking water are been produced and of course water produce in such state will definately be not conducive or advisable to drink but due to the level of the corruption of Nigeria government such water company will be approve to the citizens due to bribery of the company and this has to definately stop because the state of production of water will definitely increase the mortality rate of Nigeria. Even speaking concerning the hygienic sanitation poses a whole lot of issue because statistically it is low. Almost half of every state in Nigeria has poor water drainage system compare to Belarus which has a well structured drainage system. I do not actually want to make comparison but its just too much because these are simple things which causes so many disease creating unhygienic environment for the people of Nigeria. As a science student I have studied that the cause of Malaria is the parasite «Anopheles Mosquitoe». This specie of Mosquitoe needs an unhygienic environment to breed i.e it needs a dirty pool of water and the number of dirty pool in Nigeria is uncountable.

And it has also been estimated that a child dies every 1 hour due to Malaria. How alarming it for the government of Nigeria not to make urge to reslove the situation because the grassroot of Malaria cause its is breeding site. Like in Belarus which have a very good drainage system it will be difficult for such parasite to inhabit such environment and WHY? Because there is no place for the parasite to breed.

**References:**