

Initiative to Reduce Child Mortality Rate in the Democratic Republic of the Congo

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Abstract

The Democratic Republic of the Congo (DRC) has one of the highest under-5 child mortality rate (U5MR) in the world. The DRC presents one of the most difficult settings for health development. Environmental issues present in DRC include destruction of natural resources and forests, illegal hunting of native fauna, and water contamination. Many reasons are present influencing the high rate of mortality rate, one being the nation's dependence on a health system affected by years of war, bad government and financial misguidance. A second reason implicates the disparity of access to health care, health services administration and growth. This paper will present an initiative on a program to reduce U5MR in the DRC through breastfeeding and child nutrition education or infant and young child feeding. The doctorate prepared nurse practitioner is responsible for fostering alliances and effectively integrating the plan into action with clear and concise communication about the importance of breastfeeding and child nutrition with the ultimate goal of achieving U5MR to at least as low as 25 deaths per 1,000 live births by 2030.

Keywords: Under-5 child mortality rate, The Democratic Republic of the Congo

Initiative to Reduce Child Mortality Rate in the Democratic Republic of the Congo

The Democratic Republic of the Congo (DRC) has one of the highest infant mortality rates in the world. The DRC is the second largest country in Africa after Algeria, the 11th largest with a population of over 83 million people, and the 16th most populated country in the world (Central Intelligence Agency, 2018). Despite being the world's largest producer of cobalt ore, and a major producer of copper, gold and diamonds, nutrition and health outcomes remain extremely poor (Kandala et al., 2014). Child mortality rate or the death of a child before the child's 5th birthday, measured as the under-5 mortality rate (U5MR), in DRC is 104 deaths per 1000 live births compared to the world's rate of 39 per 1000 and 6.5 per 1000 in the United States of America (USA) as of 2017 (UNICEF, World Health Organization, World bank Group, & United nations, 2018). The child mortality rate is considered the best proxy indicator of general population health and the level of socioeconomic development. The child mortality rate is also a useful marker of overall development and a Millennium Development Goal (MDG) indicator. The Sustainable Development Goals (SDGs) adopted by the United Nations in 2015 were developed to promote healthy lives and well being for all children. The SDG Goal 3 is to end preventable deaths of newborns and U5MR by 2030 (Kandala et al., 2014).

Accelerated progress will be needed to achieve the Sustainable Development Goal (SDG) target on U5MR by 2030 (UNICEF, World Health Organization, World bank Group, & United nations, 2018). Meeting the SDG target would reduce the number of deaths of children under five years old by 10 million between 2017 and 2030 (United Nations, 2018). A high rate of mortality among children reflects precarious conditions such as poor nutrition, low access to drinking water and inadequate health services. Malnutrition is a frequent cause of death for children under five years old. DRC needs to set their own targets and develop specific strategies

to reduce child mortality and monitor their progress towards the reduction. In the DRC several conditions influence child mortality, including mother's level of education, hygienic, socioeconomic, cultural, environmental and geographic factors such as access to clean drinking water. Many of the deaths are avoidable with low-cost measures such as continuous breast-feeding, improved nutrition and vaccinations (World Health Organization, 2018). Malnutrition plays a big role in U5MR, according to UNICEF 43.5% of children under 5 are malnourished and stunted (2018).

The DRC presents one of the most difficult settings for health development. Environmental issues present in DRC include destruction of natural resources and forests, illegal hunting of native fauna, and water contamination. Many reasons are present influencing the high rate of mortality rate, one being the nation's dependence on a health system affected by years of war, bad government and financial misguidance. A second reason implicates the disparity of access to health care, health services administration and growth. (Dagnelie, Luca, & Maystadt, 2018). Urban areas perform fairly well, but rural areas lack the health infrastructure adequate to address child mortality issues. A third factor contributing to the exacerbation of this situation is the conflict afflicting the Country, since 1996 the DRC has been hit by a war known as "Africa's first world war", involving at least six nations in the region (Lindskog, 2016). The war has devastated and destabilized the country, claiming the lives of about six million civilians. The combined effects of this war and the preceding decades of poor governance and mismanagement have contributed to the impoverishment of the DRC (Dagnelie, Luca, & Maystadt, 2018).

The global community recognizes the crucial need to end preventable child deaths, making it an essential part of the Global Strategy for Women's, Children's and Adolescent's Health (2016–2030) and the third Sustainable Development Goal (SDG) to ensure healthy lives

and promote wellbeing for all people at all ages (UNICEF, 2017). SDG goal 3 calls for an end to preventable deaths of newborns and children under 5 years of age and specifies that all countries should aim to reduce neonatal mortality to at least as low as 12 deaths per 1,000 live births and U5MR to at least as low as 25 deaths per 1,000 live births by 2030. Given the current burden of deaths, child survival remains an urgent concern (UNICEF, 2017).

Different initiatives can be introduced into the area to improve U5MR and take a step closer at achieving SDG goal 3. The introduction of prenatal vitamins, breastfeeding teaching, and child nutrition education are initiatives with the potential of improving not only the health of children but also the health of mothers and families in general. The initiative will create a website as a tool for fundraising to purchase and distribute the necessary supplies and educational materials simultaneously providing information about breastfeeding and nutritional needs with preferred choices among easily available food groups in the country. In the DRC food can be limited at times, introducing ways of preparing the meals could also potentially improve the health of the population in general and in turn decrease the U5MR. Although the initiative will be targeted at reducing the U5MR, the education provided to women have the potential to be sustained and continuously dispersed by families, social groups and different generations.

Malnourished children have a higher risk of death from common childhood illness such as diarrhea, pneumonia, and malaria (World Health Organization, 2018). Nutrition-related factors contribute to about 45% of deaths in children under-5 years of age. The above-mentioned initiative can be introduced at a relative low cost to the already-impooverished country to help achieve the goal of decreasing U5MR in the DRC. First, prenatal vitamins for improvement of development of a healthy fetus and a healthy pregnancy. Second, Counseling and support for optimal breastfeeding including early initiation, exclusive breastfeeding for the first six months

and continued breastfeeding up to two years of age or beyond. Third, integrated management of child nutrition and vaccinations through facility- and community-based education. The three steps are difficult to separate if the initiative could potentially have an impact in the U5MR in the DRC. While the provision of prenatal vitamins and the administration of vaccines require increase funding and support from multiple agencies to increase the inventory needed to tackle the task, breast feeding teaching and child nutrition could potentially be initiated with limited resources and willing volunteers. This paper, hence, will present an initiative on initiating a program to reduce U5MR in the DRC through breastfeeding and child nutrition education or infant and young child feeding (IYCF).

Literature Review

It is vital to set forth an initiative with education focused on the major player who could potentially produce the biggest outcome and growth towards the ultimate goal of reducing U5MR. Mothers are the main focused population for this initiative. Mothers' education on breastfeeding and child nutrition has been shown, in multiple previous studies, to have a strong impact on the promotion of child growth and development. According to a study by Lamberti et al "Breastfeeding for reducing the risk of pneumonia morbidity and mortality in children under two: a systematic review and meta-analysis" optimal breastfeeding practices, which involves exclusive breastfeeding during the first six months and continued breastfeeding up to age two with nutritional balanced supplementation are critical part in reducing the burden of disease among infants and young children (2013). The same recommendation is promoted by the World Health Organization (WHO) as a cost-effective and easily accessible solution for the decrease of infant and child mortality rate. The systematic review examined studies from Latin America, South Asia, Africa and the Western Pacific. The study results showed marked difference in

pneumonia related mortality between exclusively breast fed infants and not breastfed infants of 1.66 and 14.97 respectively and a decrease on all-cause mortality rate from 14.40 to 1.48 directly related to exclusively breastfeeding.

Halder and Kejriwal conducted a study in India in 2015 titled “Nutritional awareness of mothers in relation to nutritional status of the preschool children” resulting in conclusive evidence on how the mother’s nutrition education and knowledge affect the quality of food offered to a child, particularly the food offered after six months of exclusive breastfeeding to supplement nutrition. The study established a strong association between nutritional status of the child and nutritional awareness of the mother with a decrease in child mortality rate and education of the whole family. Further, declines in U5MR in Sub-Saharan African countries over the past 20 years have been attributed to health interventions, such as optimal breastfeeding and child nutrition according to a cross-sectional analysis performed in 2014 of 35 sub-Saharan African countries by Corsi and Subramanian. The study attributed a decrease in U5MR of 29 per 1000 by providing health education and it predicted the repercussions of the education in families responsible for the continued reduction in the U5MR in sub-Saharan Africa, possibly decreasing the U5MR from 104 to below 80 if implemented in the DRC.

The importance of introducing the initiative are highlighted in another study “ The influence of seasonality and community health worker provided counseling on exclusive breastfeeding- findings from a cross-sectional survey in India” by Das, Chatterjee, Karthick, Mahapatra, & Chaudhuri in 2016 where the importance of developing healthy adults was directly associated to breastfeeding and adequate nutrition, pointing out 35% of U5MR can be attributed to malnutrition. In addition, the study mentions the use of exclusive breastfeeding as a possible cost-effective tool in the already resource-limited settings, as is the DRC. Emphasis on adequate

nutrition starting at birth with exclusive breastfeeding is fundamental for the development of healthy adults and therefore a healthy country with economic gains and growth. The impoverished country of the DRC could benefit from the initiative immediately by a reduction in U5MR and in the future by a growth in resources related to healthy and productive adults.

According to Bukusuba, Kaaya, & Atukwase in a cross-sectional study published in 2018 in a population in a rural Ugandan setting, through breastfeeding and nutritional supplementation with semi-solid food after 6 months and through age 2 the lives of almost 1300 children under 5 could had been saved in the district studied alone – the study was conducted in the district of Buhweju in the southwest region of Uganda with a population of over 120,000 people between September and October 2016. The multiplied impact of the study over the DRC could potentially result in saving countless of lives with the power of education alone.

Action Plan

Reality is as difficult as it sounds, eradication of U5MR would be ideal, but not a realistic plan. Controlling or reducing the rate, even if it saves the life of 1 child, would be the goal for this initiative.

Plan of action

- 1- Contact the governing agency of the country and request permission and guidance for the initiative. Investigate if similar local initiatives are in place and join forces
- 2- Contact other agencies with similar goals over the world, other countries or agencies already involved in the DRC willing t expand services – i.e. UNICEF.
- 3- Create a non-profit organization and develop methods for fundraising and marketing.

- 4- Develop a plan for teaching the teachers and volunteers about breastfeeding and nutrition with the native foods available and any resources easily available to the population – rice, plantains, vegetables, meat, etc.
- 5- Create flyers and educational material in the different local dialects and/or languages or with pictures to leave a lasting resource for the population.
- 6- Provide sample foods to the population during educational sessions to improve and promote attendance.
- 7- Obtain local translators and pay attention to local beliefs, rituals and dietary habits to incorporate into the nutritional plan in a healthier way if possible
- 8- Provide support to breastfeeding mother by providing educational sessions while pregnant offering breastfeeding tools and groceries as a motivation for attendance.
- 9- Encourage mothers to continue educational sessions after giving birth and through the child's 5th birthday by providing monthly instructional sessions with complimentary water, food, written education flyers in their native language or with pictures showing the most nutritional choices.
- 10- Involve local governing agencies and health care works in the initiative, educate local volunteers and provide monetary or other incentives for participation in order to reach remote villages.

Short-term goals

- The short term –goals include creating an action plan and the fundraising process through a newly created not-for-profit organization with the single goal of reducing U5MR through education of breastfeeding and child's nutrition.

- Join forces with UNICEF to create a breastfeeding and child nutrition kit to distribute to qualifying families.
- Research local cuisine, local foods, cooking preferences and consult with chefs and nutritional experts for healthier alternatives within the available resources.
- Begin the process of creating educational material in all native languages, dialect and with picture, considering population unable to read and write.

Long-term goals

- The long-term goal is to have a measurable impact on the nutritional status of the children and a lasting effect on the future generation.
- To achieve SDG goal 3 of under-five mortality to 25 deaths per 1,000 live births by 2030.
- To create a sustainable and successful initiative with lasting results for the entire country.

Population

Pregnant women, breastfeeding mothers and mothers with children under 5 years of age will be the main focused population of the initiative. Special circumstances could be made to allow other population if necessary.

Key personnel within the country

Local government, village chiefs and health care providers

Contact the WHO representative in the DRC – Dr. Allarangar Yokouide - and also the UNICEF.

UNICEF and WHO, along with a range of partners, have formed a global advocacy initiative to increase political commitment to and investment for breastfeeding as the cornerstone of child nutrition, health and development.

Methods of data collection and analysis

Surveys will be done periodically to analyze the impact of the initiative. Personnel and/or volunteers will keep record of the populations reached, dividing the data into pregnant, breastfeeding or mothers with children under 5 years of age.

Summary

Strength and Barriers

The strength of this initiative is the low cost relative to the potential benefit obtained. Barriers might include language, culture, and gender bias. If gender bias is encountered all efforts will be made to include the fathers in the initiative to promote involvement. The success of this initiative will set the groundwork for other similar initiatives to be applied to all needed countries around the world. Education could be long lasting and it could be passed on from one individual to a family to village, to town, district, and eventually the nationally. It could continue from generation to generation creating an initiative that is effective, low cost and self-sustainable over time and generations.

The role of the doctorate prepared nurse practitioner (DNP) is that of a leader, educator and researcher. Advocacy for the in-need population and lobbying with local government to gain access will be an immense undertaking delegated to the DNP. The DNP is responsible for fostering alliances and effectively integrating the plan into action with clear and concise communication about the importance of breastfeeding and child nutrition. In global health the DNP is responsible for bringing experience and education to lead a project for the improvement and betterment of mankind starting one child at a time, build knowledge and provide evidence based practice to promote and enhance breastfeeding programs and policies with appropriate financing, communication and sustainability.

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