

From research desk to policy makers and community: *MUHAS* research symposia and policy briefs targeting the stakeholdersHendry R. Sawe¹, Bruno F. Sunguya¹, Eligius F. Lyamuya¹¹Muhimbili University of Health and Allied Sciences**Abstract**

All too frequent, valuable research output and scholarly materials from expensively conducted research work in different parts of the world end up in research desks, academic libraries, and scientific journals. Muhimbili University of Health and Allied Science (MUHAS) through the Directorate of Research and Publications initiated a series of symposia that aim to disseminate the evidence generated by the researchers to the policy makers and the community. In two of the six conducted University-wide symposia in the last one year, MUHAS produced two important policy briefs summarizing the impact of MUHAS research in two important—though distinct areas of local and global health impact—Elimination of Mother to Child Transmission (EMTCT) of HIV, and Diarrhea diseases.

All too frequent, valuable research output and scholarly materials from expensively conducted research work in different parts of the world end up in research desks, academic libraries, and scientific journals. While this is a norm for most scholars, several challenges emanate from this practice, as research results are not translated into appropriate strategies for implementation. Often times the key stakeholders and the community remain unaware of such discoveries and their potential positive impact on health. In an effort to address this challenge, Muhimbili University of Health and Allied Science (MUHAS) through the Directorate of Research and Publications initiated a series of symposia that aim to disseminate the evidence generated by the researchers to the policy makers and the community. In two of the six conducted University-wide symposia in the last one year, MUHAS produced two important policy briefs summarizing the impact of MUHAS research in two important—though distinct areas of local and global health impact—Elimination of Mother to Child Transmission (EMTCT) of HIV, and Diarrhea diseases.

Elimination of Mother to Child Transmission of HIV

In this enlightening symposium, MUHAS researchers provided highlights on the efforts and achievements that are being made to shift from prevention to eliminating the transmission of HIV from mothers to children during pregnancy, birth and breastfeeding period. Mother-to-child transmission (MTCT) of HIV accounts for 90% of HIV infections in children, making it the main route of transmission among children below 15 years. In Tanzania, where nearly a fifth of all new HIV infections are due to MTCT, the country set aims to virtually eliminate MTCT.

In this symposium, the following were the key findings that were shared:

- While Tanzania falls short of the EMTCT goal, by 2016 there was a significant progress towards EMTCT as nearly 70% MTCT reduction was achieved since 2009 when the Global Plan targets were set.
- The MTCT rate at the end of breastfeeding has gone down to 8% falling short of the Global Plan target level of less than 5%.
- The progress so far can be attributed to the use of effective PMTCT regimens including Option B+ and also increased access to ART by pregnant women living with HIV.
- Additionally, the integrated ANC/PMTCT services are provided in 97% of all health care facilities in the country, about 98% of pregnant women attend ANC at least once during pregnancy and around 90% of all women are now tested for HIV during antenatal care visits.

Landscape of diarrhoeal diseases in children in Tanzania and the way forward

MUHAS scientists and their collaborators gathered to provide updates on the progress made towards reducing the burden of diarrhoea illness in children in Tanzania. One good news that was presented was the fact that a significant progress has been made in reducing diarrhoea-specific mortality in Tanzania from 30,000 deaths in 1998 to 8000 deaths in 2015, a 75% decrease. This remarkable decline in diarrhoeal deaths came against a backdrop of 25% increase in population size within the same period. Further the scientists informed that

the selected child survival interventions notably, Oral Rehydration Therapy (ORT) and improved nutrition, accounted for most of the decline in diarrhoea mortality.

Despite the notable gains, however, diarrhoea remains the second leading cause of deaths among the under-5 population in Tanzania. To date, ORT use remains low in the country, with 44.8% coverage, while that of Zinc therapy lags behind at 40%. Zinc therapy has been shown to reduce frequency of diarrhoea, volume per episode, duration of illness, and recurrence. However, the side effects (such as vomiting) associated with its use have limited its acceptability.

In this symposium, the following were the key take away messages from different studies:

- The results from the ZRDT clinic trial showed similar diarrhoea outcomes in children receiving 5 or 10 mg per day of supplemental zinc, but less vomiting compared to children receiving the standard 20mg dose.
- Lower doses of supplemental zinc (5 or 10 mg per day) have the same therapeutic effects in reducing frequency, amount, and duration of diarrhoea compared to the standard 20mg dose but with significantly less vomiting. The results are similar in prevention of recurrence of diarrhoea.
- There was no difference in diarrhoea outcomes among children with severe diarrhoea who were given antibiotic (azithromycin), ORT and zinc supplement, compared to controls who received ORT and zinc supplement only. Furthermore, the increased risk of drug interaction between azithromycin and lumefantrine, a common anti-malarial medication, was raised.
- Irrational use of antibiotics increases the risk of anti-microbial resistance (AMR). *Shigella* was found to be the most common bacterial isolate, with rotavirus the most common overall. Despite the high coverage of rotavirus vaccine (at 99% for the last dose), infection due to rotavirus infection is still high. Study researchers noted high resistance of *E. coli* to standard antibiotic therapy, ciprofloxacin in particular at 8.9%
- Research is needed to determine the efficacy of rotavirus vaccine in sub Saharan population and a need to look for a *Shigella* vaccine

In the end the two dissemination activities provide highlights on significant efforts by researchers that normally ends up in academic archives or scientific journals that and may not necessarily be translated into implementable policies or practices for the delivery of quality health care services. This commendable practice is critical in informing policy and best practices at national and global levels.