

Towards Elimination of Lymphatic Filariasis in Ghana: Refining the Strategy Through Quality Improvement.

ABSTRACT

Introduction

The Global Strategy to Eliminate Lymphatic Filariasis (GFELF) through Mass Drug Administration (MDA) has been implemented in Ghana since the year 2000 and transmission has been interrupted in 76 of 98 endemic districts. To improve the MDA in the remaining districts with microfilaria (MF) prevalence above the 1% threshold for the interruption of transmission, there is a need to identify and implement appropriate quality improvement (QI) strategies. This PhD aimed to develop and test quality improvement strategies to effectively eliminate lymphatic filariasis disease as a public health problem in Ghana.

Methods

Due to the complexities associated with implementing evidence-based programs such as the lymphatic filariasis mass drug administration and variability in the context, three-phase cross-sectional implementation research was conducted. In the pre-intervention, need assessment to identify implementation bottlenecks associated with the implementation of lymphatic filariasis mass drug administration in the Bole and Central Gonja Districts in Northern Ghana was conducted using a mixed-methods approach. Based on the findings of the initial assessment, a context-specific quality improvement strategy was designed and implemented using intervention mapping strategy in terms of seven domains (actor, the action, action targets, temporality, dose, implementation outcomes addressed, and theoretical justification) in one Plan-Do-Study-Act cycle. The post-intervention phase used RE-AIM (Reach, Effectiveness, Adoption, Implementation, and Maintenance) framework based on a mixed-methods approach to evaluate the context-specific evidence-based quality improvement intervention on the lymphatic filariasis mass drug administration in Bole District of Northern Ghana.

Results

The initial needs assessment shows that the persistent transmission of lymphatic filariasis in the Bole District is characterised by refusal to ingest the drug, self-reported adverse drug reactions, low MDA coverage at the community level, poor adherence to the mass drug administration protocol, poor knowledge about the disease and the mass drug administration exercise. The

evaluation results showed that there was an improvement in social mobilisation and sensitisation, knowledge about disease and mass drug administration process, willingness to ingest the medication and adherence to the directly observed treatment strategy. We observed an increase in the district mass drug administration coverage and a reduction in self-reported adverse drug reaction.

Conclusion

The level of reach, effectiveness and adoption at district, sub-district and at the individual participants' level suggest that the context-specific evidence-based quality improvement intervention is feasible to implement in lymphatic filariasis hotspot districts based on initial context-specific needs assessment. For Ghana to meet the 2030 NTDs road map, it is important to identify context-specific need-based quality improvement strategies to deal with implementation bottlenecks in partnership with key stakeholders to make the drug accessible to all eligible individuals in the LF endemic communities. This can be done through the application of appropriate implementation science tools to improve the implementation of the lymphatic filariasis mass drug administration intervention.

Keywords

Lymphatic Filariasis, Mass Drug Administration, Quality Improvement, Context-specific, Evidence-based, Bole, Northern Ghana.