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Evaluation of implementation fidelity to national guidelines on management of tuberculosis in paediatric patients in Homa-Bay County, Kenya

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2022
https://hdl.handle.net/10539/37105

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ABSTRACT

Background

Tuberculosis (TB) has been a major public health concern for a long time. Infection in children has not been given a lot of focus as in adults despite children being a vulnerable population with weaker immunity. Prognosis is worse when there is HIV/TB coinfection. The WHO rolled out guidelines for the management of TB in pediatric patients which were adopted by the Kenya Government. Health care workers then implement the guidelines. The Objectives of this study were to measure adherence to national guidelines on the management of Tuberculosis in Pediatric patients (up to 14 years) and to identify moderators affecting implementation fidelity.

Methods

A convergent parallel mixed method design was used to collect information from TB treatment sites in Homa bay County. The study was conducted during the months of August, September and October 2018.Quantitative data collected focused on Pediatric patients between ages zero and 14. A checklist based on the guidelines was designed to review 442 records in the clinics for a four-year period (2014 to 2018). Qualitative data was collected through in-depth interviews with eight Sub-County TB coordinators. Interview moderators were based on Carrol et al Implementation Fidelity framework. Summation of "yes" and "No" responses were tallied to get an adherence score for the County as a whole and for the sub-counties individually. The qualitative analysis used the thematic method in excel spreadsheets.

Results

Results showed high adherence for the County with a median of 80% (IQR 66.66-93.33%). Four of the sub-counties with normally distributed scored had a mean score of 79% and while the other four had a median score of 80% (66.66 – 93.33). Guidelines which had low implementation fidelity scores were those involving follow up tests i.e., sputum, gene X-pert and X-ray during duration of treatment. In the qualitative aspect good facilitation strategies were found to be in place from both the County and national TB programs. An attitude of fear, lack of knowledge on infection prevention, lack of skills to produce specimens for TB testing and staff shortages affected quality of treatment delivery. The health care workers reported ease in following the guidelines especially with the roll out of new guidelines which simplified diagnosis of TB in children, drugs which are dispersible and in fixed dose combination. Participant's response to the intervention was poor with both health care workers and patients expressing difficulties with direct observed therapy schedule which required frequent visits and frequent follow up tests.

Conclusion and recommendations.

In conclusion, implementation fidelity to guidelines on management of tuberculosis is high. Good facilitation strategies is a positive moderator towards achieving high implementation fidelity. The national TB program in Kenya is doing well so far in monitoring the process of

guideline implementation once rolled out, however, to be able to achieve the sustainable development goal eradicating TB, further follow up is needed in the facilities to improve the levels of adherence from 80% to 100%. Use of the conceptual framework by Carroll has proved to be a good guide in evaluating healthcare worker's performance in implementing treatment guidelines

It is recommended that health workers should undergo more sensitization on why certain guidelines have been put in place e.g., repeating sputum samples at different phases of treatment in order to improve quality of care. More training on vital procedures e.g., gastric aspirate should also be done to improve health workers' confidence and ease diagnosis of TB at younger age.

Further research on implementation fidelity on other evidence based interventions would go a long way to improve service delivery and ensure other program goals are met.