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## Improving quality assurance in malaria diagnosis at Lodwar county and referral hospital laboratory, Turkana county in Kenya

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Quality assurance is an important component in malaria diagnosis and management. Malaria diagnosis has been a major challenge at Lodwar county and referral hospital laboratory due to a deficiency of staff training on quality assurance. This led to substandard patient care and management, 35% of the slides sampled initially were noted to have false results. The aim of this study was to upgrade malaria QA practices to have timely, accurate and quality assured laboratory diagnosis. 10 staffs were trained on malaria quality assurance. EQA focal person was appointed. An implementation plan was laid down through a lab meeting which involved SOP development, CMEs to discuss critical areas including proper sample collection, serialization of samples, preparation of thin and thick smears, reagent preparation, staining, parasite quantification, species identification and performance of daily IQC. On job training and staff competence was done. The laboratory was also enrolled on EQA. After implementation of malaria quality assurance, there was a tremendous improvement in malaria diagnosis and management. Among the improvements included excellent preparation of thick and thin blood smears, excellent staining, improved quantification of results, species identification, serialization of slides and archiving of slides for EQA sampling. Slide re-examination showed a tremendous reduction of false results to 2%. Quality assurance in malaria microscopy was successful. Compliance to the standard operating procedures, planning, and involvement of the hospital management is key. EQA performance acts as a standard measure since what can be measured can be fixed.

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