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Review Article

Quality assurance in rapid diagnostic tests for accurate diagnosis of malaria

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Early and accurate detection of malaria is essential for appropriate case management, minimizing unnecessary treatment, and supporting surveillance efforts crucial for disease control and elimination. Microscopy has long been the reference method for malaria diagnosis. Rapid diagnostic tests (RDTs) have revolutionised point-of-care diagnosis of malaria, with billions of units distributed globally over the past decade. However, ensuring their reliability necessitates rigorous quality assurance measures. Inaccurate test performance can lead to misdiagnosis, inappropriate treatment, increased mortality, and the potential emergence of drug-resistant strains that can lead to delay in achieving the target of malaria elimination. Strengthening quality assurance protocols is crucial to maintain the accuracy of malaria diagnostics, enhancing disease surveillance, and bolstering global malaria elimination initiatives. This paper focuses on the role of quality assurance in optimising the performance and reliability of malaria RDTs. By implementing enhanced quality assurance frameworks, diagnostic accuracy can be safeguarded, toward malaria eradication.

Keywords Malaria; QC panel quality assurance; Quality control; Rapid diagnostic kit test