

Use of laboratory drug sensitivity tests and prescription practices in Malawi

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Objective

Assessment of routine use of drug sensitivity test results to guide treatment choices in district hospitals in Malawi.

Introduction

Of the 13 million people in Malawi (1) 85% are rural and the country has high burden of under-five morbidity and mortality due to preventable infectious diseases. Respiratory, febrile and diarrhea diseases are the top 3 morbidity and mortality illnesses in most developing countries (2). Acute medical care has greatly improved these conditions, but widespread and uncontrolled use of antibiotics threatens to reverse gains achieved so far. Drug sensitivity tests are a prerequisite to guide prescription practices.

Methods

An evaluative study on all 28 district hospital laboratories in all regions of Malawi. The data are routine quarterly assessments covering from October 2009 to April 2011. The main focus was on performance of culture procedures, drug sensitivity testing practice, documentation and demand and use of drug sensitivity results by clinicians.

Results

Malawi has 29 district hospital laboratories of which only 12 (41%) are currently able to perform culture procedures. Only four (14%) of the laboratories performing culture procedures are able to perform drug sensitivity cultures, which should inform prescription practices.

There is lack of demand and reliance on drug sensitivity tests by the prescribing clinician. Clinicians sited the lack of laboratory capacity and also the delays that go with culturing procedures.

Inadequate laboratory performance of drug sensitivity tests coupled with syndromic clinical diagnosis are the culprits of antimicrobial resistance and treatment access in Malawi.

There is no laboratory-based data forming sensitivity profiles of most antibiotics used to treat common infectious diseases.

Conclusions

Malawi is one of the many low income countries that can claim no substantive laboratory-based data on antimicrobial susceptibility. Laboratory surveillance of antimicrobial resistance is a prerequisite to guide informed selection and purchase of drugs for local use based on scientific proof. This is more cost effective and may lead to modification of treatment procedures as necessary.

Keywords

Drug sensitivity tests; prescription practices; clinicians; laboratory -based data.

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