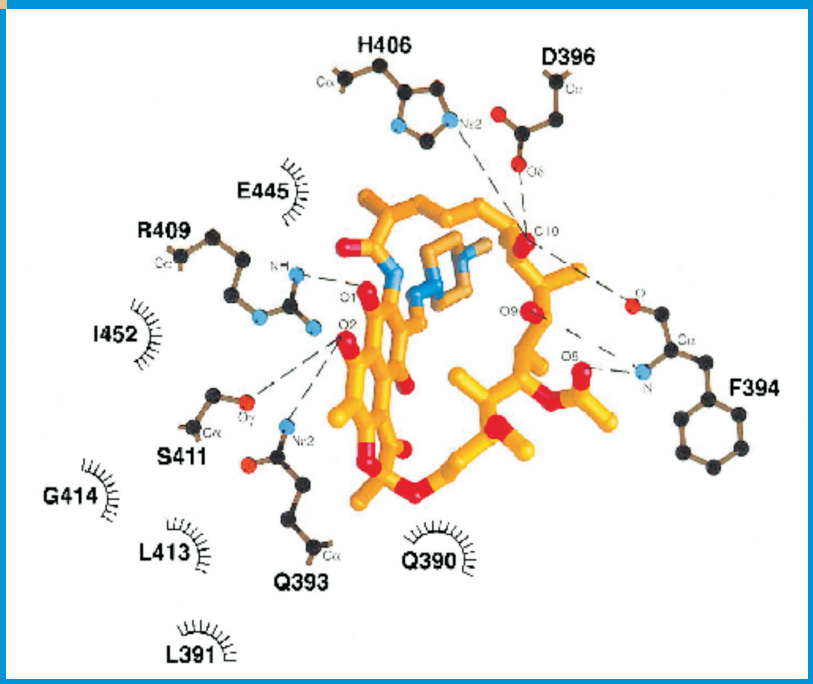
Guidelines for Global Surveillance of Drug Resistance in Leprosy



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Foreword

The emergence of drug resistance is a cause for concern and a threat for any infectious disease intervention programme. For leprosy, a chronic disease with social stigma, drug resistance poses a serious impediment especially at the stage where a dramatic decline in prevalence and new case detection has been achieved due to intensive and concerted chemotherapy interventions made by the national programmes and its global partners. There seems to be an extraordinary degree of complacency about drug resistance, in spite of current challenges faced by TB control programmes and the history of dapsone-resistance and its negative effects on the leprosy control strategies. This has resulted in lack of priority and absence of information on current magnitude of drug resistance in leprosy which, of course, is not evidence of an absence of drug resistance. It is assumed that a combination of three drugs, if taken regularly will prevent the emergence of drug resistance. In addition, there is limited information on patient adherence with the unsupervised components of multidrug therapy (MDT). Although the problem of drug resistance is presently not acute, it is important that we collect data more systematically and monitor the trend carefully so that effective measures to combat this problem can be developed. With the recent development of more practical and quick DNA sequencing methods to detect drug resistance, several reports of rifampicin, dapsone and ofloxacin resistance have been published which further highlights the emerging threat.

In order to contain the threat, WHO has planned the following two-pronged strategy:

(1) To closely monitor trends in occurrence of relapses after treatment with MDT due to drug resistance, particularly to rifampicin, and

(2) To promote research on developing new drugs for non-rifampicin containing regimens to limit and treat patients who relapse after completing one or more courses of MDT due to resistant strains of *M. leprae* (secondary resistance) and those new patients who are not responding to standard MDT regimen (primary resistance).

The establishment of a network for global surveillance of drug resistance in leprosy is primarily to keep a close vigil on the drug resistance scenario at many vulnerable settings. To accomplish this, WHO has developed a simple guidelines to carry out sentinel surveillance and this initiative is expected to be conducted annually on a routine basis. This initiative will be coordinated by WHO' Global Leprosy Programme with support and collaboration from national programmes and major research institutes around the world. The research institutes have offered to provide free-of-cost testing of samples sent to them from the sentinel sites in several endemic countries. The results will be published annually in the Weekly Epidemiological Record of WHO in agreement with the national programmes.

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1 Rationale

The emergence of drug resistance is a concern and a threat for many infectious disease intervention programmes especially when secondary prevention (chemotherapy) is the main component of the control strategy. The fight against leprosy has been a great success largely due to the development of multidrug therapy (MDT) in 1981. Since 1995, as a result of donations to WHO from The Nippon Foundation and Novartis Foundation for Sustainable Development all leprosy patients have had access to MDT free of cost. The effectiveness of MDT in curing leprosy in a short time has brought about a dramatic decrease in the disease burden in all leprosy-endemic countries. The disease prevalence has declined significantly especially in countries where leprosy has been highly endemic for decades and along with the decline in prevalence the annual new case detection has also started to decline in some countries.

Since rifampicin is the backbone of MDT, it is important to monitor the emergence of rifampicin-resistant mutants, as recent reports and