## STUDIES ON THE RATIONAL USE OF CHLOROQUINE IN THE MANAGEMENT OF UNCOMPLICATED MALARIA IN LAGOS STATE GENERAL HOSPITALS.

BY

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# STUDIES ON THE RATIONAL USE OF CHLOROQUINE IN THE MANAGEMENT OF UNCOMPLICATED MALARIA IN LAGOS STATE GENERAL HOSPITALS.

# A THESIS SUBMITTED IN FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY (PH.D.) IN THE DEPARTMENT OF CLINICAL PHARMACY & BIOPHARMACY, FACULTY OF PHARMACY, UNIVERSITY OF LAGOS, NIGERIA.

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## DECLARATION

We hereby declare that this thesis titled "studies on the rational use of chloroquine in the management of uncomplicated malaria in Lagos State General Hospitals" is a record of original research carried out by **AINA**, Bolajoko Ajoke in the department of Clinical Pharmacy and Biopharmacy, Faculty of Pharmacy, University of Lagos.

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## **DEDICATION**

THIS WORK IS DEDICATED TO GOD ALMIGHTY FOR HIS PROVISION AND PROTECTION THROUGHOUT THE PERIOD OF THE STUDY.

TO MY HUSBAND AND CHILDREN MR. M. A. AINA, OKUNOLA, OLANREWAJU AND OLAPOSI; AND MY WARD TOYIN OSOSANYA.

AND TO MY PARENTS LATE MR. E.G. SOKALE AND MRS M.I. SOKALE

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#### ABSTRACT

Malaria is a curable and preventable disease and it is a major public health problem in Nigeria and Chloroquine is still the first line drug in its treatment in Nigeria. Inappropriate prescribing which is the failure to prescribe drugs in accordance with guidelines based on scientific evidence to ensure safe, effective, and economic use, is an irrational drug use behavior. Increased benefits from chloroquine or a slow down of progression to resistance could be achieved by improving prescribing practice, drug quality, and patient compliance.

The objectives of the study were to determine the impact of two modes of educational intervention on chloroquine prescribing pattern of prescribers in Lagos State General Hospitals, to determine the quality of chloroquine dosage forms available in these hospitals and to undertake cost effectiveness analysis of chloroquine tablet and injection.

The study was carried out in all the ten General Hospitals under Lagos State Hospitals Management Board. One hundred prescriptions each for adults and children at each hospital were systematically sampled between January and December 2000. Where there were fewer than 100 prescriptions all the prescriptions available were sampled for quantitative analysis. Questionnaires were distributed to prescribers between November and December 2001 for quantitative and qualitative analysis.

Quality of the chloroquine dosage forms available in these hospitals was determined using British Pharmacopoeiea methods. The cost effectiveness analysis of chloroquine tablet and injection chloroquine was calculated

Educational intervention took place between January and February 2002. Seminars were presented in 8 out of the 10 hospitals. Among the 8 that had seminars, 4 hospitals had

educational posters while the other 4 had plastic boxes describing correct doses of chloroquine left behind. Two hospitals served as control.

There was significant increase in the percentage of prescriptions with correct dosage of chloroquine post-intervention compared with pre-intervention (p<0.01). There was association between intervention and correctness of dosage of chloroquine prescribed (p<0.001). There was association between the mode of intervention and dosage of chloroquine prescribed (p<0.001). There was also association between the dosage of chloroquine and the different dosage forms of chloroquine prescribed (p<0.001). There was no significant difference between the group with plastic box and the group with poster in percentage of correct prescriptions (p>0.05).

There was no statistically significant difference in percentage of correct prescriptions between 1 month, 3 months, 6 months and 12 months post intervention hence outcome of intervention was sustained.

The tablets passed the quality tests more than the two other dosage forms. Tablet chloroquine was more cost effective than injection chloroquine

The conclusion from this study is that educational intervention improved the prescribing pattern of chloroquine. Tablet should be encouraged more than injection because it is safer and more cost effective. There is need to determine the quality of chloroquine available in our hospitals.