DEDICATION

I dedicate this work to my beloved wife Jane Kanyamale Mukesela whose unconditional encouragement and support made it possible for me to commence training.

I wish to express my heartfelt love to my children Mwaka, Lusekelo and Nkundwe for coping with the undue paternal deprivation during the course of my study.

To my family, I love you all.

Most of all I pledge allegiance to the Lord Almighty for the strength and encouragement He has given me.

DECLARATION

I, Mukesela Abraham, hereby declare that this dissertation is my original work. It has been prepared in accordance with the guidance for the Masters of Public Health of the University of Zambia. It has not been submitted elsewhere for any other degree at this or another University.

Signature…… Date…….....

STUDENT

FOR SUPERVISORS ONLY:

I have read this dissertation and approved it for examination.

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Signature…… Date……

CERTIFICATE OF APPROVAL

This dissertation of Mr. Abraham Mukesela is approved as part of the fulfillment of the requirements for the award of the Degree of Master of Public Health by the University of Zambia.

Examiners signatures	**Date**
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ACKNOWLEDGEMENT

I wish to express my sincere gratitude to my sponsors, Ministry of Health for enabling me to undertake a Master of Public Health course at the University of Zambia.

My utmost gratitude goes to my supervisors, Dr. S. Nza and the late Dr Gavin B. Silwamba (MHSRIP), for their guidance and tremendous support they gave me throughout the research and writing of this study. I am especially grateful to Dr. S. Nzala, who was involved in every step of the study and unselfishly gave an inordinate amount of time and energy to the research project.

I am also grateful to the entire management of the University of Zambia, in particular the School of Medicine, Department of community medicine for faci itating my learning.

Thanks are also extended to my colleague Patrick Kaonga at UTH endocrinology Laboratory for his encouragement and criticisms in bringing this study to completion.

I am grateful for the assistance of University Teaching Hospital Management and staff to entrust me with the information to proceed with the research.

I wish to acknowledge the contributions of all those who assisted me in one way or another.

Your untiring guidance, hard work and encouragement were invaluable without which the research would not have been possible.

For all this, I truly thank you all and may the good Lord bless you richly.

ACRONYMS

AIDS	-	Acquired Immune Deficiency Syndrome
ART	-	Antiretroviral therapy
CSO	-	Central statistical Office
DHMT	-	District Health Management Team
DOTS	-	Directly Observed Treatment Short Course
HIV	-	Human Immunodeficiency Virus
INH	-	Isoniazid
MDR-TB	-	Multidrug-resistant tuberculosis
MoH	-	Ministry of Health
RMP	-	Rifampicin
SPSS	-	Statistical Package for Social Sciences
STIs	-	Sexually Transmitted Infections
TB	-	Tuberculosis
USA	-	United States of America
UTH	-	University Teaching Hospital
UNAIDS	-	Joint United Nations Program on HIV/AIDS
USAID	-	United States Agency for International Development
WHO	-	World Health Organization
XDR-TB	-	Extensively drug-resistant tuberculosis

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ABSTRACT

Tuberculosis (TB) is an infectious disease caused by *Mycobacterium tuberculosis*.

There were 14.4 million individuals worldwide living with TB including half a million cases of Multidrug-resistant (MDR) TB in 2006. A most serious aspect of the problem has been the emergence of MDR-TB and extensively drug-resistant (XDR) TB.

MDR-TB is defined as a strain of *Mycobacterium tuberculosis* that is resistant to at least Isoniazid and Rifampicin whether there is resistance to other drugs or not.

XDR-TB is defined as resistance to at least rifampicin, isoniazid, a second line injectable drug (capreomycin, kanamycin or amikacin) and a fluoroquinolone.

China, India and the Russian Federation are thought to carry the largest MDR-TB global caseload. World Health Organization (WHO) estimates that there were 66,700 MDR-TB cases in Africa in 2006. In 2005 approximately 50 cases were reported as having MDR-TB in Zambia.

Treatment of MDR-TB requires prolonged and expensive chemotherapy.

The main objective of this study was to determine the prevalence of and factors associated with MDR-TB among adults with TB at University Teaching Hospital (UTH) in Lusaka, Zambia. Specific objectives were to describe the demographic characteristic of patients presenting with MDR-TB, determine the proportion of MDR-TB cases among TB culture-positive patients, and to determine the association between HIV/AIDS, previous TB treatment and compliance on one hand and MDR-TB on the other.

A cross-sectional study was conducted in UTH TB Laboratory in among culture-positive TB patients. Facility TB records and databases for *M tuberculosis* isolates which were cultured and had drug-sensitivity testing performed against four first-line anti-TB drugs were studied retrospectively. All the records and databases available between 2003 and 2008 were reviewed.

The results have been presented in graphical and tabular form. The proportion of MDR-TB among the TB culture-positive patients was 10.9%. The association between age and MDR-TB was not statistically significant. The observed proportions of females between positive and negative were statistically different. There was no significant association between employment status and MDR-TB. There was an association between HIV/AIDS and MDR-TB. There was an association between compliance and MDR-TB.

We conclude that there is need for continuous monitoring of MDR-TB and XDR-TB.