AN ASSESSMENT OF INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS [IMCI] SCREENING FOR AIDS BASED ON WHO CRITERIA AND MODIFICATIONS USING A RETROSPECTIVE REVIEW OF PAEDIATRIC CASE RECORDS FROM EDENVALE HOSPITAL

Thein Win

A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg in partial fulfilment of the requirements for the degree of Master of Science in Medicine in the field of Child Health.

Johannesburg, 2006
DECLARATION

I, Thein Win declare that this research report is my own work except to the extent indicated in the reference citations and acknowledgements. It is being submitted for the degree of Master of Science in Medicine in the field of Child Health, to the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination at this or any other Universities.

The Ethics Committee on Human Research, University of Witwatersrand approved the study unconditionally. The medical ethics clearance certificate number is M02-04-32 (5 May 2002).

(Thein Win)

9 May 2006
DEDICATION

To my late mother, Daw Kyi Kyi.

To my family, Theingi Aung and two sons, Win Htoo Aung and Win Myint Aung with thanks for not worrying about all the hours spent away from them.

To Nobel Peace Laureate, Daw Aung San Suu Kyi, non-violent freedom fighter of Burma who has given me moral inspiration.
ABSTRACT

The study aimed to evaluate IMCI guidelines, developed to assess children with Suspected Symptomatic HIV [SSHIV] as a screening tool for AIDS.

OBJECTIVES

1. To look at the agreement between IMCI classification for SSHIV and WHO clinical case definition for AIDS using a retrospective record review of the same hospitalised children.
2. To determine the sensitivity, specificity, positive predictive values and likelihood ratios of the IMCI SSHIV criteria (Guidelines 2001), WHO clinical case definition for paediatric AIDS and Bloemfontein Proposed simplified case definition for paediatric SSHIV, using HIV ELISA results in children older than 15 months as a gold standard.

METHODS

The study involved 304 children in the IMCI age range who were admitted to the Edenvale Hospital during the study period and who met all the inclusion and exclusion criteria. These children were assessed with IMCI criteria and WHO criteria for AIDS. [Objective 1]

The findings of 50 children above 15 months of age with ELISA results were compared using 3 sets of criteria. [IMCI, WHO and Bloemfontein proposed simplified case definition for paediatric SSHIV] [Objective 2]

FINDINGS

IMCI and WHO criteria for AIDS were the same in 158 [52%] of the 304 children. Almost all [22 out of 23 children] with WHO criteria for AIDS were also classified by IMCI criteria as Suspected Symptomatic HIV. [Objective 1]
IMCI criteria had the highest sensitivity [85.7%], while WHO criteria had the highest specificity [88%] based on ELISA results. [Objective 2]

CONCLUSION

Based on the above findings, IMCI criteria could be considered as a screening tool to select children aged 15 months and above for appropriate laboratory investigation for HIV infection confirmation in remote areas. WHO criteria for AIDS could be considered for exclusion of AIDS in children aged 15 months and above in remote areas where laboratory facilities are not available.

In this study, reliable findings could not be obtained in children younger than 15 months.
ACKNOWLEDGEMENTS

I am most grateful to my supervisors, Professor L. Wagstaff, Emeritus Professor of Community Paediatrics (University of Witwatersrand), who gave me incredible support and supervision; Professor Sharon Fonn, Head, School of Public Health, Faculty of Health Services, University of Witwatersrand; Dr. Renay Weiner, Specialist, Public Health Medicine, School of Public Health; and Professor Haroon Saloojee, Head, Division of Community Paediatrics, Department of Paediatrics and Child Health for their guidance, support and encouragement.

I would also like to thank the following persons:

♦ Dr. Kernes, Chief Executive Officer, Edenvale Hospital for allowing me to use the patient records for this research report;
♦ Mr. Kwena Mokolobotlo, technician from the laboratory, who helped me to find the cases for this research study and whose efforts saved me valuable time;
♦ My friend, Dr Khin San Tint, Women’s Health Project, who offered constructive criticism of my dissertation;
♦ Sisters Lenah Mphane, Regina Matshele and Devi Govindsamy from the paediatrics ward for all their assistance with patient records and for filing the cases;
♦ Mr. Zwelakhe Mtsaka from the Wits Writing Centre, University of the Witwatersrand and Ms Joy Hull, professional research writing editor for help in the writing process, including the editing of my paper.
CONTENTS

TITLE i
DECLARATION ii
DEDICATION iii
ABSTRACT iv
ACKNOWLEDGEMENTS vi
CONTENTS vii
TABLE OF CONTENTS viii
ETHICS COMMITTEE CLEARANCE xi-xii
LIST OF TABLES xiii
ABBREVIATIONS xiv
TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION & LITERATURE REVIEW

1.1. INTRODUCTION 1

1.1.1 BACKGROUND TO IMCI 1

1.1.2 TECHNICAL BASIS & REVIEW OF IMCI CRITERIA OF SSHIV 2

1.1.3 SIGNIFICANCE & RATIONALE OF THIS STUDY 2

1.2 LITERATURE REVIEW 4

1.2.1 DIAGNOSIS OF PAEDIATRIC HIV INFECTION 4

1.2.2 WHO CLINICAL CASE DEFINITION FOR AIDS IN CHILDREN 5

1.2.3 PREVIOUS STUDIES RELATED TO IMCI SSHIV INFECTION 6

A Horwood et al Study (Ngwelezane Hospital) 6

B van Gend et al Study (Bloemfontein) 7

C Jones et al Study (Coronation Hospital) 11

D Factor et al Study (Bangladesh) 12

E Conclusion 13

CHAPTER 2: METHODS

2.1 AIM & OBJECTIVES OF THE STUDY 14

2.2 STUDY METHODS 14

2.2.1 Study site 14
2.2.2 Study participants 15
2.2.3 Selection criteria 15
2.2.4 Inclusion Criteria 16
2.2.5 Exclusion criteria 17
2.2.6 Study Measurements 17

2.3 DATA ANALYSIS 17
2.4 ETHICAL CONSIDERATIONS AND APPROVAL 18
2.5 FINANCIAL SUPPORT 19

CHAPTER 3: RESULTS

3.1 AGREEMENT BETWEEN IMCI CLASSIFICATION FOR SSHIV AND WHO CLINICAL CASE DEFINITION FOR AIDS 20
3.2 COMPARISONS BETWEEN IMCI SSHIV, WHO CLINICAL CASE DEFINITION AND BLOEMFONTEIN PROPOSED SIMPLIFIED CASE DEFINITION FOR SSHIV INFECTION 22
3.3 DEMOGRAPHIC DATA OF SAMPLE 23
3.4 CLINICAL FEATURES OF IMCI & WHO CLINICAL CASE DEFINITION FOR AIDS IN THIS STUDY 24

CHAPTER 4: DISCUSSION, RECOMMENDATIONS & CONCLUSIONS

4.1 STRENGTHS & DEFICIENCIES OF THREE CRITERIA OF DIAGNOSIS OF HIV INFECTION IN CHILDREN 26
4.2 DISCUSSION BASED ON RESULT OF EDENVALE STUDY 28
4.3 LIMITATIONS OF THE STUDY 30

4.4 RECOMMENDATIONS 30

4.5 CONCLUSION 31

APPENDICES 32-35

Appendix A 32
Appendix B 33
Appendix C 34
Appendix D 35

REFERENCES 36-37
ETHICS COMMITTEE CLEARANCE CERTIFICATE
UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Division of the Deputy Registrar (Research)

COMMITTEE FOR RESEARCH ON HUMAN SUBJECTS (MEDICAL)

Ref. R44-48 Win:

CLEARANCE CERTIFICATE

PROJECT
To Assess & Compare Suggestive Features of Human Immunodeficiency Virus Infection And Tuberculosis According To Integrated Management of Childhood Illness (IMCI):
Criteria With Hospital Diagnosis

INVESTIGATORS
Dr T Win

DEPARTMENT
School of Public Health, Wits Medical School

DATE CONSIDERED
02.04-05

DECISION OF THE COMMITTEE

Approved unconditionally

DATE 02.05-20  CHAIRMAN...........................................(Professor P E Cleaton-Jones)

Guidelines for written "informed consent" attached where applicable.

cc Supervisor: Prof L A Wagstaff
Dept of School of Public Health, Wits Medical School

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and ONE COPY returned to the Secretary at Room 10001, 10th Floor, Senate House, University.

I/We fully understand the conditions under which I/We are authorized to carry out the aforementioned research and I/We guarantee to ensure compliance with those conditions. Should any departure to be

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>TABLE 1:</td>
<td>Agreement between IMCI SSHIV and WHO clinical case definition for AIDS</td>
<td>20</td>
</tr>
<tr>
<td>TABLE 2:</td>
<td>Comparisons between IMCI SSHIV, WHO clinical case definition and the Bloemfontein proposed adaptation (BFT) based on positive HIV ELISA reaction (15 months and above age group)</td>
<td>22</td>
</tr>
<tr>
<td>TABLE 3:</td>
<td>Gender distribution of the children with ELISA results</td>
<td>23</td>
</tr>
<tr>
<td>TABLE 4:</td>
<td>ELISA status in age group divisions</td>
<td>23</td>
</tr>
<tr>
<td>TABLE 5:</td>
<td>Frequency of clinical features in all children classified as IMCI SSHIV infection</td>
<td>24</td>
</tr>
<tr>
<td>TABLE 6:</td>
<td>Frequency of clinical features in all children diagnosed as WHO paediatric AIDS (SSHIV)</td>
<td>25</td>
</tr>
</tbody>
</table>
## ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
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<tr>
<td>AFRO</td>
<td>Africa Regional Office</td>
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<tr>
<td>AIDS</td>
<td>Acquired Immunodeficiency Syndrome</td>
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<td>CAH</td>
<td>The Department of Child and Adolescent Health and Development</td>
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<td>ELISA</td>
<td>Enzyme Linked Immuno-Sorbent Antibody</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>IMCI</td>
<td>Integrated Management of Childhood Illness</td>
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<td>LR</td>
<td>Likelihood Ratios</td>
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<td>PCR</td>
<td>Polymerase Chain Reaction</td>
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<td>PEM</td>
<td>Protein Energy Malnutrition</td>
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<td>PMTCT</td>
<td>Prevention of Mother to Child Transmission</td>
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<td>PPV</td>
<td>Positive Predictive Value</td>
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<td>Road to Health Card</td>
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<td>SSHIV</td>
<td>Suspected Symptomatic HIV</td>
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<td>UNAIDS</td>
<td>United Nations Programme on AIDS</td>
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<td>UNICEF</td>
<td>United Nations Children’s Fund</td>
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<td>WHO</td>
<td>World Health Organization</td>
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</tbody>
</table>