

**FACTORS CONTRIBUTING TO THE PATTERN OF ATTENDANCE OF PATIENTS AT
THE EMERGENCY DEPARTMENT (ED) AT CARLETONVILLE HOSPITAL**

Misael Fernandez Silva

A thesis submitted to the Faculty of Health Sciences, University of the Witwatersrand, in

the fulfillment of the requirements for the degree

of

Masters of Family Medicine

Johannesburg, 7 of October 2011

Declaration

I, Dr. Misael Fernandez Silva declare that this research report is the result of my own work. It has been submitted for the degree of Masters in Family Medicine, to the University of Witwatersrand, in Johannesburg. This research has never been submitted before for any other examination or degree at any other institution or University.

An approval from the Ethics Committee for Research on Human Subjects (Medical) was obtained upon submission, and the approval number is **M080547**.

Dr. Misael Fernandez Silva

On this 7 day of October 2011

To my wife and children for their inspiration
on furthering
my career

Abstract

Aim: to describe the pattern of attendance from patients to the Emergency Department (ED) at Carletonville Hospital and explanations for the pattern.

Methods: The study used a descriptive cross sectional design, exploring the patient's demographics, clinical domain, factors related to patients and the system, in 250 participants.

Results: The typical attendee was either a female or a male, in the age group of 14 to 28 years, unemployed (60.2 %), having medical problems (30.0 %), coming during afterhours (78.8 %), using an ambulance for transportation (51.2 %) and residing in Khutsong (31.6 %). Eighty seven percent reported their problems as serious, but were coded as green (59.6 %) in the triage tool, and 79.2% were discharged after the visit.

Conclusions: Need exist for educating the local community in the use of the ED, and attending other local health resources like clinics and general practitioners. Further studies are required to explore the appropriateness of ED use and help seeking behaviour of the local community.

Acknowledgement

I would like to say thank you to the Department of Family Medicine at the Witwatersrand Faculty of Medicine, for giving me the opportunity to complete successfully the years expected for this Master Degree.

Especial thanks in this Department to Professor Bruce Sparks, former Head of the Department, for his teachings and personal exemplar in commitment to the medical career, his words of wisdom, and encouragement to complete this degree.

To Professor Anne Wright, the course coordinator: for her dedication in our teachings, her continuous encouragements and vigilant follow up of the completion of the research. Without your continuous reminder, the completion of this work would not be possible.

A very special word of thanks to the Research Supervisor, Dr. Claire Van Deventer, for her tireless revisions of the research drafts, her advice, correction notes and encouragement to succeed with this study.

To these fellow colleagues and friends: Dr. Fernando Rosado Aguilera, for introducing me to the Family Medicine path; and to Dr. Aswin Kalain and Dr. Felix Herrera Rodriguez: for their advice and endless support throughout the research process. I duly appreciate your inputs and support.

A deep thanks to Ms. Zethu Mgoduka and Mr. Passion Motsegwe, the nurses that willingly worked in the questionnaire administration and data collection. With your valuable time and dedication, this work could be finished.

To Mrs. Gill Mc Lachlan and Dr. Jennifer Stacey, my sincere thanks for reviewing and proofreading this paper and to Mrs. Maureen Motseko for her continuous support, throughout the process of preparation and finalization of this work.

Table of contents

	Page
DECLARATION.....	ii
DEDICATION.....	iii
ABSTRACT.....	iv
ACKNOWLEDGEMENTS.....	v
TABLE OF CONTENTS.....	vi
LIST OF FIGURES.....	x
LIST OF TABLES.....	xi
CHAPTER 1.....	1
Introduction.....	1
1.1 Rationale.....	1
1.2 Aim.....	1
1.3 Objectives.....	2
CHAPTER 2.....	3
Literature Review.....	3
2.1 Introduction.....	3
2.2 Purpose of the literature review.....	4
2.3 Search criteria and search engines.....	4
2.4 Review of the Literature.....	5
2.4.1 Appropriateness of attendance.....	5
2.4.2 Reasons for attendance.....	6
2.4.3 Feature of the age and gender in the attendance pattern.....	8
2.4.4 Encounter Domain.....	9
2.4.5 Time of attendance.....	10
2.4.6 Triage tools and results of the encounter.....	11
2.5 Conclusion.....	12
CHAPTER 3.....	13
Methodology.....	13
3.1 Study design.....	13
3.2 Site of the Study.....	13
3.3 Study Population.....	13
3.4 Sample Size.....	13

3.4.1 Sampling.....	14
3.4.2 Selection or recruitment of subjects.	14
3.4.3 Inclusion criteria.....	14
3.4.4 Exclusion criteria.....	14
3.5 Measuring tool or instrument.....	14
3.6 Data collection.....	15
3.6.1 Data capturing.....	16
3.6.2 Pilot Study.....	16
3.6.3 The questionnaire content.....	17
3.6.4 Sources of bias.....	17
3.6.5 Ethics.....	18
3.6.6 Data Analysis.....	19
3.6.7 Problems/limitations.....	20
CHAPTER 4.....	21
Results.....	21
4.1 Introduction.....	21
4.1.1 Demographic data.....	21
4.1.2 Age groups.....	21
4.1.3 Gender.....	22
4.1.4 Employment status.....	22
4.1.5 Residence	23
4.2 Clinical Problems or Domains.....	24
4.3 Factors Related to the Patients.....	25
4.3.1 Time of attendance.....	25
4.3.2 Own perception of possible time to attend or not attend the Emergency Department.....	26
4.3.3 Reason for time of attendance.....	27
4.3.4 Length of time the patient had experienced the problem	28
4.3.6. Self-rating of the severity of their problem.....	29
4.3.7 Self-rating of expected service.....	29
4.4 Factors Related to the System.....	30
4.4.1 Transport use.....	30
4.4.2 Use other levels of health service.....	31
4.4.3 Reasons for the use/not use of other levels of care.....	31

4.4.4 Triage colour code of every case	32
4.4.5 End-result of the encounter	32
4.5 Association between Variables.....	34
4.5.1 Associations between age groups and encounter domains.....	34
4.5.2 Correlation of own perception of severity and triage color Codes.....	35
4.5.3 Association between Places of residence and encounter domains	35
4.5.4 Correlations of places of residence and mode of transport used...	37
4.5.5 Association between: age groups and “to be examined by a doctor”	38
4.5.6 Expectations from the service and own perception of severity.....	39
4.5.7 Triage Colour and End result of the encounter.....	39
CHAPTER 5.....	41
DISCUSSION.....	41
5.1 Demographic data	41
5.1.1 Age groups.....	41
5.1.2 Gender.....	42
5.1.3 Employment status.....	42
5.1.4 Place of Residence.....	43
5.1.5 Clinical problems or domains.....	44
5.2 Factors Related to the Patients.....	45
5.2.1 Time of attendance.....	45
5.2.2 Own perception possible time to attend or not the ED.....	45
5.2.3 Reason for time of attendance.....	46
5.2.4 Duration of the problem.....	47
5.2.5 Self-rating of the severity of their problem.....	47
5.2.5 Self-rating of expected service.....	48
5.3 Factors Related to the System.....	49
5.3.1 Transport use	49
5.3.2 Use of other levels of health services.....	50
5.3.4 Reasons for the use/non use of other levels of care.....	50
5.3.5 Triage colour code.....	51
5.3.6 End-result of the Encounter.....	52
CHAPTER 6.....	53
6.1 Conclusions.....	53

6.2 Recommendations.....	53
APPENDICES.....	54
APPENDIX A.....	54
APPENDIX B.....	56
APPENDIX C.....	57
APPENDIX D.....	60
APPENDIX E.....	61
APPENDIX F.....	62
APPENDIX G.....	63
APPENDIX H.....	64
REFERENCES.....	65

LIST OF FIGURES

Figure

4.1 Gender distribution.....	22
4.2 Employment status of patients >15 Years old.....	23
4.3 Clinical problems or domains.....	25
4.4 Time of Attendance.....	26
4.5 Distribution of patients according to the triage scores.....	33
4.6 Encounter End-results.....	33

LIST OF TABLES

Table

4.1 Age Groups.....	21
4.2 Residence.....	24
4.3 Own perception of possible time to attend or not the Emergency Department.....	26
4.4 Reasons for time of attendance.....	27
4.5 Length of illness or problem from initiation of symptoms to presentation at the Emergency Department.....	28
4.6 Distribution of self-rating of severity.....	29
4.7 Ratings of first choice of expectation from service.....	30
4.8 Type of transport used to reach ED.....	30
4.9 Attendance at another level of care.....	31
4.10 Reasons for the use/non-use of other levels of care.....	32
4.11 Age groups and encounter domain.....	34
4.12 Own perception of severity and triage colour.....`	28
4.13 Relationship between Places of residence and encounter domain..	36
4.14 Places of residence and transport used.....	37

4.15 Age groups and “to be examined by a doctor”	38
4.16 Firsts Expectation from the service and perception of severity.....	39
4.17Triage Colour and End result of the encounter.....	40