

THE IMPACTS OF UNDERUTILIZATION AND OVERUTILIZATION
OF HOSPITAL SERVICES IN BANGLADESH



Helal Uddin Ahmad

A Thesis Submitted in Partial Fulfillment of the Requirements

for the Degree of Master of Science

Department of Economics

Graduate School

Chulalongkorn University

1995

ISBN 974-632-185-4

Thesis title : THE IMPACTS OF UNDERUTILIZATION AND
OVERUTILIZATION IN HOSPITAL SERVICES OF
BANGLADESH

Graduate : Helal Uddin Ahmad
Department : Economics
Advisor : Dr. Isra Sarntisart
Co-advisor : Assoc. Prof Warnya Patarasuk

Accepted by the Graduate School, Chulalongkorn University
in Partial Fulfillment of the Requirements for a Degree of
Master of Science in Health Economics.

Santi Thoongsuwan
.....Dean of Graduate School
(Assoc. Prof. Dr. Santi Thoongsuwan)

Thesis Committee:

Sothitorn Mallikamas
..... Chairman
(Asstt. Prof. Dr. Sothitorn Mallikamas)

Isra Sarntisart
..... Advisor
(Dr. Isra Sarntisart)

Warnya Patarasuk
..... Co-advisor
(Assoc. Prof. Warnya Patarasuk)

Chev Kidson
..... Member
(Dr. Chev Kidson)

ต้นฉบับ หน้าขาดหาย

ACKNOWLEDGEMENTS

I am very much thankful to almighty Allah, the merciful, for his grace, strength and care throughout this research study including the course as well, without him it would be impossible on my part to complete the course and as well as the research study.

I am deeply indebted to the teaching staff of the Center for Health Economics, especially to Dr. Isra Sarntisart, my thesis advisor and Associate Professor. Waranya Patarasuk, thesis co-advisor from whom I received valuable comments, suggestions and co-operation, which served as a useful guide to complete this thesis in time.

I express my gratitude to Dr. Kaemthong Indaratna, Center Director and Program Director, the former Program Director and Professor Somkid Kaewsanthi, former Center Director Associate Professor Dr. Wattana S. Janjaroen as well as their team of able and experienced teachers and others who spent their invaluable time to provide me with modern concept and knowledge in the economic arena which helped me in preparing and completing of the study.

Ms. Patchanee and Ms. Yuree, Secretaries of the Center for Health Economics extended all possible co-operation and relentless afford in carrying out the formalities for completion of the course and defending the proposal and the thesis; I am grateful to all of them.

My special thanks should go to the World Health Organization (WHO), who supported me with funding for this program of Master of Science, Health Economics, I express my gratitude to the organization.

Helal Uddin Ahmad
May, 1995

CONTENTS

	Page
Abstract	ii
Acknowledgements	iii
Contents	iv
List of Tables	v
List of Figures	vi
 Chapter	
1. Introduction	1
1.1 Rationale	1
1.2 Objectives	2
1.3 Theoretical Framework	3
1.4 Literature Review	5
1.5 Benefits of the Study	14
2. Background of Hospital Services in Bangladesh	16
2.1 Description about Bangladesh	16
2.2 Economic Status of Bangladesh	16
2.3 Importance of Economic Status- Why and How ?	17
2.4 Economic Conditions of Bangladesh	17
2.5 Structure of Hospital Services	23
3. Demand, Supply and Concept of Utilization	27
3.1 Demand and Supply	27
3.2 Demand for and Supply of Hospital Services ..	35
3.3 Underutilization	39
3.4 Overutilization	39
4. The Impacts of Underutilization and Overutilization and the Methodology for Assessment	42
4.1 Factors Affecting Underutilization and Overutilization	42
4.2 The Impacts of Underutilization and Overutilization	43
4.3 Methodology for Assessment of the Impacts....	45
4.3.1 Quality of Care	45
4.3.2 Allocation of Resources	49
4.3.3 Level of Patients Satisfaction	50
4.4 Medical Indicators and Measurements	52
4.5 Economic Solution of the Problem	54
4.6 Estimation of Demand and Supply	57
5. Conclusions and Recommendations.....	60
5.1 Conclusions.....	60
5.2 Recommendations.....	61
References	62
Appendix : Biography	

List of Tables

Table	Page
1.1 Types of Physician and Hospital Utilization Indices	8
1.2 Selected Studies Showing a Positive Association between Insurance Coverage and Utilization	11
2.1 Indicators of National Accounts, Finance and Banking	20
2.2 Gross National Products of Bangladesh at Current Market Prices	21
2.3 Annual Growth of GDP by Sectors	22
2.4 Annual Health Expenditures by the Government	23
2.5 Structure of Hospital Services of Bangladesh	24

List of Figures

Figure	Page
1.1 Conceptual Framework on Impacts of Underutilization and Overutilization of Hospital Services	4
3.1 Demand for Health Care	28
3.2 Increasing Demand	32
3.3 Change in Supply	33
3.4 Perfectly Inelastic Supply	35
3.5 Underutilization of Beds at Thana level	39
3.6 Overutilization of Beds at the District hospital	40
4.1 Hypothetical Relationship between Bed Utilization and Average Length of Stay	49
4.2 Bed Occupancy and Percentage of Pneumonia	53
4.3 Bed Occupancy and Postoperative infection rate	53
4.4 Length of Stay and Thrombotic Embolism	54
4.5 Consumer Surplus and Producer Surplus	54
4.6 Increase in Price and Decrease in Consumer Surplus	56
4.7 Upward Shift in Demand and increase in Consumers Surplus	56
4.8 Increase in Utilization due to Insurance	57
4.9 Long run and Short run Supply	59