# PERCEPTION OF DEFERRED BLOOD DONORS ABOUT SERVICE PROCESSES ENCOUNTERED AT THE NATIONAL BLOOD CENTER, RED CROSS SOCIETY, THAILAND, 2004

Mr. Wuthipan Subhachaturas

A Thesis Submitted in Partial Fulfillment of the Requirements

for the Degree of Master of Public Health in Health Systems Development

College of Public Health

Chulalongkorn University

Academic Year 2003

ISBN 974-9599-46-2

Copyriht Chulalongkorn University

Thesis Title	Encountered at the National blood Center, Red Cross Society, Thailand, 2004
Ву	Mr. Wuthipan Subhachaturas
Program:	Master of Public Health (National Blood Program Management) College of Public Health
Thesis Advisor	Valaikanya Plasai, M.P.H., Dr.P.H.
Accepted by	the College of Public Health, Chulalongkorn University, Bangkok,
Thailand in parti	al fulfillment of the requirements of the Master's Degree
	Acting Dean of the College of Public Health
THESIS COMM	IITTEE
	Chairman
(Associ	iate Professor Ong-Art Viputsiri, M.D., Dr.P.H.)
lllll	a Cui Thesis Advisor
	anya Plasai, M.P.H., Dr.P.H.)
	Thesis Co-Advisor
(Assista	ant Professor Somrat Lertmaharit, M. Med. Stat)
	mel Cheerifs - Member
(Profes	sor Pimol Chiewsilp, M.D.)



### ABSTRACT

# # PH 032394 Major: NATIONAL BLOOD PROGRAM MANAGEMENT KEY WORDS: BLOOD DONATION, PERCEPTION, SATISFACTION, DEFERRED BLOOD DONOR, CUSTOMER, DEFERRAL

WUTHIPAN SUBHACHATURAS: PERCEPTION OF DEFERRED BLOOD DONORS ABOUT SERVICE PROCESSES ENCOUNTERED AT NATIONAL BLOOD CENTER, RED CROSS SOCIETY, THAILAND, 2004

THESIS ADVISOR: VALAIKANYA PLASAI, Dr.P.H. THESIS CO-ADVISOR: ASST. PROF. SOMRAT LERTMAHARIT, M. Med.Stat. 112 PP. ISBN 974-9599-46-2

Background: Quality assurance and safety of blood supply policy has been focusing since the first Thai HIV case in 1984. Blood donor self deferral program was a specific method among various screening program launched at The National Blood Center, Red Cross Society of Thailand (NBC). Deferred blood donors' perception and satisfaction evaluation is important to improvement of the selfdeferral service process.

Objectives: To evaluate deferred blood donor satisfaction about services processes and to identify the association between the socio-demographic variables and perception and perception and satisfaction among deferred blood donors.

Research Design: Cross-sectional, explanatory study.

Participants: Deferred blood donors at the National Blood Center headquarters with a sample size of 397 subjects.

Data Collection: Self-administered questionnaire and observation were conducted during February 1 to February 29, 2004.

Statistical Method: Chi-square test

Result: The majority of deferred blood donors were ages 17-55 years, 95.6% (mean age 33.26 year) the Male: Female ratio, 1:1.8, educational level was a bachelor's degree or higher 52.2%, worked majority as private company employee and self employment (35.3% and 26.4%), first time donor 36.9% and regular donor (more than 1 time) 63.1%. Overall deferred blood donor rate was 2.92% (397 cases out of 13,613 blood donor). Deferral rate was highest in Physical Examination and Physician/ Trained Nurse Screening station. Mostly respondent agree with all items in term of place and environment, staff capability, and staff attention. Almost of respondent disagree with enough staff, description at each station, and follow-up visit provided. They satisfied with all items except convenient place for service, description at each station, and follow-up visit provide. Analysis showed that donor socio-demographics were not statistically significant related to perception levels (p-value >0.05). However, perception levels of deferred blood donors were significantly related to satisfaction (p-value <0.05) except at Self-deferral Questionnaire and Volunteer Screening station.

Conclusion: The NBC should improve policies dealing with deferred blood donor satisfaction and deferral causes in order to improve the blood donor retention program. Policies should emphasize donor recruitment and human resource improvement at every level including permanent staff and volunteers. Maintenance of deferral system should be based on cost-effectiveness and the blood security program should be adapted based on lessons from other countries. Appropriate proven procedures should be applied to practices in Thailand. Other recommendations are to: run a predonation education program to reduce the number and costs from deferred blood donors with donation promotion at the same time, change the volunteer program for grater participation and support, and to improve the relationship with blood donor regarding both giving and taking blood.

## **Acknowledgements**

This thesis was completed with the help and valuable support from many individuals. First of all, I would like to thank all deferred blood donors who participated in this study and gave their valuable time and effort. I would also like to thank Dr. Valaikanya Plasai, my advisor, who generously provided the knowledge both about the study and about in general life, Associate Professor Ong-Art Viputsiri, Assistant Professor Somrat Lertmaharit and Professor Pimol Chiewsilp who offered guidance and comments with kindness from the start till the end.

To Professor Dr. Chaivej Nuchprayoon, the Vice Secretary of Thai Red Cross Society, Dr. Rachanee O'Chareon, the Director of National Blood Center and Dr. Siosaang Phikulsod, the Vice Director of National Blood Center worked hard to give me the support I needed and the opportunity to study in this Management Master degree program.

To Roche Company for giving me my scholarship during study.

I would like to thank all of my MPH friends deserve praise for their helping hands in time of need; especially Ms. Karuna Limjareon.

I would also like to give my special thanks to my family especially my wife for not only helping me with everything during this study, but also their loving and take care of our son.

Finally, I would like to dedicate this thesis to my teachers and the National Blood Center, Red Cross Society, in the hope that it will be contribute to improvements in management and implementation of future blood program.

# **Table of contents**

Page
ABSTRACTiii
ACKNOWLEDGEMENTSiv
TABLE OF CONTENTSv
LIST OF TABLESviii
LIST OF FIGURESxii
ABBREVIATIONSxiii
CHAPTER I INTRODUCTION1
Background and Significance of the Problem
Expected Benefits of the study3
Research Questions4
Objectives4
Research Hypothesis5
Variables of the study5
Terminological and Operational Definition6
Conceptual Framework10
CHAPTER II LITERATURE REVIEW11
Knowledge about Blood Donation and Blood Supply11
Policy and System of Blood Donation at
both International and National Levels
Customers' perception and satisfaction20
Previous Studies and Researches
CHAPTER III RESEARCH METHODOLOGY25
Research Design

Sampled Population and Sample Size25
Sampling Technique
Inclusion Criteria26
Exclusion Criteria26
Limitations26
Research Instruments
Variable measurement
Data Analysis29
Reliability and Validity test29
Ethical Considerations30
CHAPTER IV RESEARCH RESULT31
Part 1. Socio-demographic data
Part 2. Descriptive analysis of Deferred Blood Donor
Perception of Blood Donor Deferral System
Part 3. Descriptive analysis of Deferred Blood Donor satisfaction49
Part 4. Opinions of Deferred Blood Donor54
Part 5. Level of Quality of Service referring to Deferred Blood Donor59
Perception
Part 6. Level of Satisfaction referring to Deferred Blood Donor6.
Part 7. Associations between Deferred Blood Donor6
Socio-demographic Data and Perception
Part 8. Associations between Perception and Deferred Blood Donor6
Satisfaction
Part 9. Associations between Deferred Blood Donor opinions and7
Satisfaction
CHAPTER V SUMMARY, DISCUSSION
Summary73
Discussion

Recommendations9	0
REFERRENCES9	)2
APPENDICES9	8
CURRICULUM VITAE11	2

# **List of Tables**

		Page
Table 4.1	Number and percentage of Deferred Blood Donors by Socio-	
	demographic Characteristics	34
Table 4.2	Percentage of deferred rate by gender	35
Table 4.3	Percentage of deferred blood donor in each station per visit	36
Table 4.4	Number, Percentage and Mean of Deferred Blood Donor	
	Perception about Blood Donor Deferral System, Overall	38
Table 4.5	Number, Percentage and Mean of Deferred Blood Donor	
	Perception about Blood Donor Deferral System, Self-deferral	
	Questionnaire and Volunteer Screening	39
Table 4.6	Number, Percentage and Mean of Deferred Blood Donor	
	Perception about Blood Donor Deferral System, Physical	
	Examination and Physician/Trained Nurse Screening	40
Table 4.7	Number, Percentage and Mean of Deferred Blood Donor	
	Perception about Blood Donor Deferral System, Hemoglobin	
	Test and Technical Staff Screening	41
Table 4.8	Number, Percentage and Mean of Deferred Blood Donor	
	Perception about Blood Donor Deferral System, Previous	
	History Checking and Information Staff Screening	42
Table 4.9	Means of each section	43
Table 4.10	Percentage and mean of deferred blood donor perception with	
	strongly agree by rank of list, overall performance	44
Table 4.11	Percentage and mean of deferred blood donor perception with	
	strongly agree by rank of list, Self-deferral Questionnaire	
	and Volunteer Screening	45
Table 4.12	Percentage and mean of deferred blood donor perception with	
	strongly agree by rank of list, Physical Examination and	
	Physician/ Trained Nurse Screening	46

		Page
Table 4.27	Deferred Blood Donor Perception of Quality of Service,	
	Physical Examination and Physician/Trained Nurse Screening.	61
Table 4.28	Deferred Blood Donor Perception of Quality of Service,	
	Hemoglobin Test and Technical Staff Screening	61
Table 4.29	Deferred Blood Donor Perception of Quality of Service,	
	Perception in Previous History Checking and Information Staff	
	Screening	61
Table 4.30	Level of Deferred Blood Donor Satisfaction, Overall	63
Table 4.31	Level of Deferred Blood Donor Satisfaction, Self-deferral	
	Questionnaire and Volunteer Screening	64
Table 4.32	Level of Deferred Blood Donor Satisfaction, Physical	
	Examination and Physician/Trained Nurse Screening	64
Table 4.33	Level of Deferred Blood Donor Satisfaction, Hemoglobin Test	
	and Technical Staff Screening	65
Table 4.34	Level of Deferred Blood Donor Satisfaction, Previous History	
	Checking and Information Staff Screening	65
Table 4.35	Association between age and perception of quality of services	67
Table 4.36	Association between gender and perception of quality of	67
	services	
Table 4.37	Association between education and perception of quality of	
	services	68
Table 4.38	Association between occupation and perception of quality of	
	services	68
Table 4.39	Association between income and perception quality of services	68
Table 4.40	Association between times donated blood and perception of	
	quality of services.	69
Table 4.41	Association between level of perception and level of	
	satisfaction, Overall	70
Table 4.42	Association between level of perception and level of	
	satisfaction, Self-deferral Questionnaire and Volunteer	
	Screening	70

		Page
Table 4.43	Association between level of perception and level	
	of satisfaction, Physical Examination and Physician/Trained	
	Nurse Screening	70
Table 4.44	Association between level of perception and level of	
	satisfaction, Hemoglobin Test and Technical Staff Screening	71
Table 4.45	Association between level of perception and level of	
	satisfaction, Previous History Checking and Information Staff	
	Screening	71
Table 4.46	Association between need to comeback for donation and	
	satisfaction	71

# **List of Figures**

		Page
Figure 1.1	Blood donor selection process at National Blood Center	9
Figure 1.2	Research Conceptual Framework	10
Figure 2.1	Donor recruitment and blood collection	14
Figure 2.2	Blood transfusion flow-chart	16
Figure 2.3	Charge of Task Force by Epstein, 2000	18
Figure 2.4	Malcolm Balridge, Health Care pilot criteria	19
Figure 2.5	Flowchart of Motivation	20
Figure 2.6	Satisfactions (Gap) between Expectation and Perception	21
Figure 4.1	Number, percentage of deferred blood donor during this study.	32

### **ABBREVIATIONS**

AABB American Association of Blood Bank

BTS Blood Transfusion Service

ICBS International Consortium for Blood Safety

ISO International Standard Organization

MASCI Management System Certification Institute (Thailand)

MOPH Ministry of Public Health

NBC National Blood Center, Red Cross Society

PDI Post Donation Information

SOP System Operating Procedure

US-FDA United States – Food and Drug Administration

WHO World Health Organization

WI Work Instruction