

**UTILIZATION AND COST RECOVERY OF MAMMOGRAPHY
AT NATIONAL CANCER INSTITUTE, THAILAND**



Mrs. WONGDUERN JINDAWATTHANA

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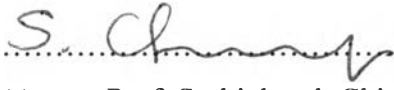
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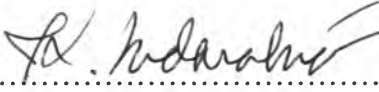
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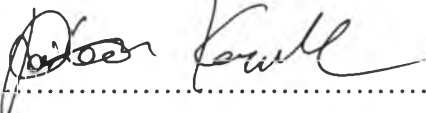
Co-advisor : Viroj Tangcharoensathien, M.D., Ph.D.

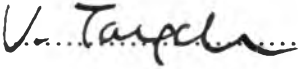
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..... Dean, Faculty of Economics
(Assoc. Prof. Suthiphand Chirathivat, Ph.D.)


Thesis committee:

..... Chairman
(Asst. Prof. Kaemthong Indaratna, Ph.D.)

..... Thesis Advisor
(Asst. Prof. Paitoon Kraipornsak, Ph.D.)

..... Thesis Co-Advisor
(Viroj Tangcharoensathien, M.D., Ph.D.)

..... Member
(Assoc. Prof. Waranya Patarasuk)

..... Member
(Assoc. Prof. Isra Sarntisart, Ph.D.)

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WONGDUERN JINDAWATTHANA: UTILIZATION AND COST RECOVERY OF MAMMOGRAPHY AT NATIONAL CANCER INSTITUTE, THAILAND. THESIS ADVISOR: ASST. PROF. PAITON KRAIPORNSAK, Ph.D. THESIS CO-ADVISOR: VIROJ TANGCHAROENSATHIEN, M.D., Ph.D. 143 pp. ISBN 974-334-946-4

This study is intended to study the utilization pattern of mammography screening, the cost, the revenue and the cost recovery in 3 fiscal years from 1997 to 1999 at the National Cancer Institute.

The utilization pattern is classified into the patient characteristics, the provider features and other factors related to national policy and diffusion of mammography. The utilization pattern of the National Cancer Institute is the women aged over 40, with high educational level, high-income group, and among civil servants and state enterprise employees. Therefore, they are able to have a higher chance to detect and prevent breast cancer in the earlier stage. The major factors influencing utilization of mammography screening include the awareness of people to take care of themselves, e.g. doing breast self-examination, routine checkup, recommendation of physician, and trust in quality and price of this hospital. However, the insufficient knowledge about breast cancer and mammography screening of the patients should be of concern because it was found to be the most influencing factor of the mammography non-users. The problems of provider at the National Cancer Institute are the limitation of radiologists, the capacity of machines, the limitation of the number of patients per day, the office hours, and the payment mechanism for staff. These are very strong factors for decreased utilization of mammography screening. In Thailand, the national policy on mammography screening has not been clearly introduced. There are 113 mammography machines installed, with about 54% (61 mammography machines) were in Bangkok and vicinity and 65% were private owned and operated.

The cost, revenue, and cost recovery were analyzed in 3 fiscal years and adjusted to the constant 1999 price. The trends of total cost from fiscal year 1997 to 1999 of the Mammography Unit gradually increased. The average cost of mammography screening was about 1,710 Baht/test and the marginal cost was about 467 Baht/test. When comparing between the marginal cost and average cost of mammography screening during 3 fiscal years, it was found that the marginal cost was less than average cost. The hospital had a cost recovery ratio only 0.68 on average in 3 fiscal years. Break-even analysis found that this hospital can serve only 47% of the number of patients at break-even point during 3 fiscal years. Thus, the hospital should increase the number of mammography screening until it reaches the break even point, which is about 23 cases/day.

The policy implications and recommendations need to be reconsidered as follows: increase the quantity and the coverage, support for uninsured people, diffuse mammography to areas with high breast cancer incidence, train the health personnel, and collaborate with the public and private sectors in implementing a mammography screening program in the medium and long terms. A national policy on mammography screening is very important to preventive care for people and minimizes health expenditure in the long run by decreasing the treatment cost of breast cancer. Finally, the people in society will be benefit more for their better health.

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ABBREVIATIONS

ASR	Age Standardized Rate
BSE	Breast Self Examination
CBE	Clinical Breast Examination
CC	Capital Cost
CSMBS	Civil Service Medical Benefit Schemes
ESWL	Extra-corporeal Shock Wave Lithotripters
FC	Fixed Cost
FY	Fiscal Year
LC	Labour Cost
MC	Material Cost
MRI	Magnetic Resonance Imaging
N	Sample Size
NCI	The National Cancer Institute
No.	Number
Pt.	Patient
TC	Total Cost
VC	Variable Cost