INCREMENTAL COST – EFFECTIVENESS ANALYSIS OF AUTOLOGOUS SKIN GRAFTS AND CULTURED SKIN GRAFT SHEET FOR WOUND THERAPY IN BURNT PATIENTS : A CASE STUDY OF PATIENTS AT CHULALONGKORN HOSPITAL
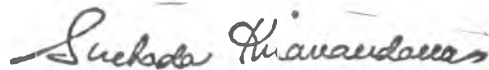
Capt. Natee Sirisom

Thesis Title	:	INCREMENTAL COST-EFFECTIVENESS ANALYSIS OF AUTOLOGOUS SKIN GRAFTS AND CULTURED SKIN GRAFT SHEET FOR WOUND THERAPY IN BURNT PATIENTS : A CASE STUDY OF PATIENTS AT CHULALONGKORN HOSPITAL
By	:	Capt. Natee Sirisom
Programme	:	Health Economics
Thesis Advisor	:	Assoc. Prof. Isra Sarntisart, Ph.D.

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

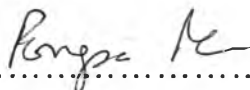……………………………………….Dean of Graduate School

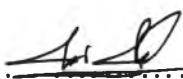(Assoc. Prof. Suchada Kiranandana, Ph.D.)

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In this study, the objective is to analyze the incremental-cost effectiveness of autologous skin graft and cultured skin graft burn therapy, from the services provider perspective, in order to use them as decision-making guideline for selecting burn therapy option. This study is based on 27 burnt and scalded patients admitted and treated with autologous skin graft in the Burn Unit at the Chulalongkorn Hospital during 1998. The resulted cost of autologous skin graft therapy is then used for approximation and calculation of the cost of cultured skin graft therapy. Finally, the results from both therapies are compared in terms of their incremental cost-effectiveness.

Estimation of cost incurred to the provider for both therapies involves all cost starting from admission to discharge. In other words, it comprises of the cost from general activities and cost from specific activities. These cost of activities, in itself, contains the capital cost which breaks down into building cost, equipment cost, and the recurrent cost which splits down into labor cost and material cost.

The result of the study shows that the average cost for autologous skin graft is Baht 166,343.99 per patient with 22.12%BSA (3,826.76 cm^2). The average length of stay is 45.55 days. The cost comprises of Baht 85,257.52 of capital cost, Baht 71,029.39 for labor cost and Baht 10,057.08 for material cost.

Meanwhile, the average cost for cultured skin graft is Baht 214,897.87 per patient with 22.12%BSA (3,826.76 cm^2). The average length of stay is assumed to be 30 days. The cost comprises of Baht 71,707.68 for capital cost, Baht 89,678.48 for labor cost and Baht 53,511.71 for material cost. These costs already include the cost for cultured skin graft sheet of Baht 96,115.42 which is much less than the cost of imported sheet of around Baht 800,000.

Calculation of the incremental cost-effectiveness from both therapies shows that, by switching from autologous skin graft therapy to cultured skin graft therapy, an additional of Baht 3,122.44 is needed in order to decrease the length of stay at the hospital by one day. The decrease in length of stay point to the benefit of cultured skin graft sheet production in Thailand.

ภาควิชา ....Economics....... ลายมือชื่อนิสิต ....Natee Sirisom.......

สาขาวิชา ....Health Economics....... ลายมือชื่ออาจารย์ที่ปรึกษา ....

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Natee Sirisom
September, 1999

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Abbreviations

NSTDA	National Science and Technology Development Agency
TBSA.	Total Body Surface Area
LOS.	Length of stay
Bt.	Baht, Unit of Thai currency
CC	Capital Cost
RC	Recurrent Cost
BC	Building Cost
EC	Equipment Cost
MC	Material Cost
LC	Labor Cost
F	Facilities Cost
OR	Operation Room
Lab	Laboratory room, Biomaterial Laboratory room