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GRITTIGA SRIAMPAI : COST-BENEFIT ANALYSIS OF NEONATAL  
SCREENING PROGRAM FOR CONGENITAL HYPOTHYROIDISM IN THAILAND: A CASE  
STUDY AT NAN PROVINCE. THESIS ADVISORS: SIRIWAN GRISURAPONG, Ph.D.,  
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The efficiency of the neonatal screening for congenital hypothyroidism program in 1996 at Nan hospital, Nan province was studied and evaluated by using benefit/cost ratio rule. The results showed that incidence rate of congenital hypothyroidism was 1:615 (1.6 from 1,000 newborns). In 1996, 2,459 newborns were screened and 4 cases of newborn hypothyroidism were found. All cost-benefits stated in this study were total cost-benefits. Internal cost or hospital cost for 4 cases was estimated to be 582,477 baht. Total external cost or household cost was estimated to be 12,213 baht. Direct benefit assessed as avoided cost of care over the patients' lifetimes was estimated to be 1,978,506 baht. The indirect benefit was calculated by summing avoided productivity loss of the affected children, which amounted to 463,847 baht. The net benefit over the patients' lifetimes was estimated to be 1,847,633.8 baht using 12% discounting rate. The benefit/cost ratio was 4.1, so it may be concluded that the program was efficient. Sensitivity analysis was done against several factors such as discount rate, incidence rate, internal costs and number of patients who recover. It was found that all of these factors affected benefit/cost ratio. These factors should, therefore, be considered carefully as they might affect the investment decision. However, the importance of ethics and merit which were uncountable factors must also be considered.