

CHANGE OF MEDICAL COST: BUSINESS FORECASTING MODEL FOR CASE OF HUMAN PAPILLOMA VIRUS VACCINE IN THAILAND

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ABSTRACT

Cost is an important concern in medicine. To select any diagnostic or the rapеutic option, there is a requirement to concern on the cost and usefulness of that manipulation. On the other hand, in view of medical device or drug company, the aim is usually the highest profit. The agreeable meeting point between medical practitioner and the company is usually an interesting situation and usually requires a long term bargaining. Sometimes, the high cost of a new medical management can be seen and the dramatically reduction of the cost might be observed after a period of time after its first implementation. Here, the author discusses on an interesting case study of human papilloma virus vaccine in Thailand.

KEYWORDS: Change, Medical Cost, Business Forecasting Model.

INTRODUCTION

Cost is an important concern in medicine. To select any diagnostic or therapeutic option, there is a requirement to concern on the cost and usefulness of that manipulation. On the other hand, in view of medical device or drug company, the aim is usually the highest profit. The agreeable meeting point between medical practitioner and the company is usually an interesting situation and usually requires a long term bargaining. Sometimes, the high cost of a new medical management can be seen and the dramatically reduction of the cost might be observed after a period of time after its first implementation. This is an interesting issue worldwide. The cast of human papilloma virus vaccine is the best example [1]. Here, the author discusses on an interesting case study of human papilloma virus vaccine in Thailand.

CASE STUDY OF HUMAN PAPILLOMA VIRUS VACCINE IN THAILAND

Human papilloma virus vaccine is the only one vaccine against cancer. It is recommended for the young women aiming at prevention of the cervix cancer. In Thailand, this vaccine is approved for usefulness [2]. The vaccine has been introduced for a few years. At first, the cost of the vaccine is extremely high. At its first introduction to Thailand [3], the medical cost for the vaccination was about 206 USD (adjusted to the present exchange rate for comparison). Nevertheless, in 2017, Thailand introduced the campaign for national coverage on cervix cancer vaccine. Due to the new public health policies, the bargaining between Ministry of Public Health and vaccine companied occur and the dramatic reduction of the cost of vaccine occurred. The medical cost for vaccination reduced to about 9 USD.

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BUSINESS FORECASTING MODEL ANALYSIS

To analyze this phenomenon by business forecasting model, the estimated number of vaccine at the first time of introduction of vaccine in Thailand was 10,000 persons per year will increased to 400,000 persons per year according to the universal vaccination campaign. If we applied primary assumption that there is a fixed unit cost of vaccine of the company and equal to "X", the medical cost of vaccine at its first vaccination will be 206/X and 9/X times of company unit cost, respectively. Comparing the reduction of the cost, the cost reduces for 22.89 times. Comparing to the increasing in number of expected vaccinees which is equal to 40 times increasing, the business forecasting model can show that the profit of the vaccine company increase for 1.75 times despite significant reduction of the vaccine price. This implies that the price of the vaccine can be more reduced to

give a fairer price, the medical cost for promoting the vaccination coverage in Thailand.

CONFLICT OF INTEREST: None

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