

# The Economic Impact Analysis of a Proposal to Abandon Non-Prescription Drug Reimbursement in Thailand, A Case Study of Non-Sedating Antihistamines

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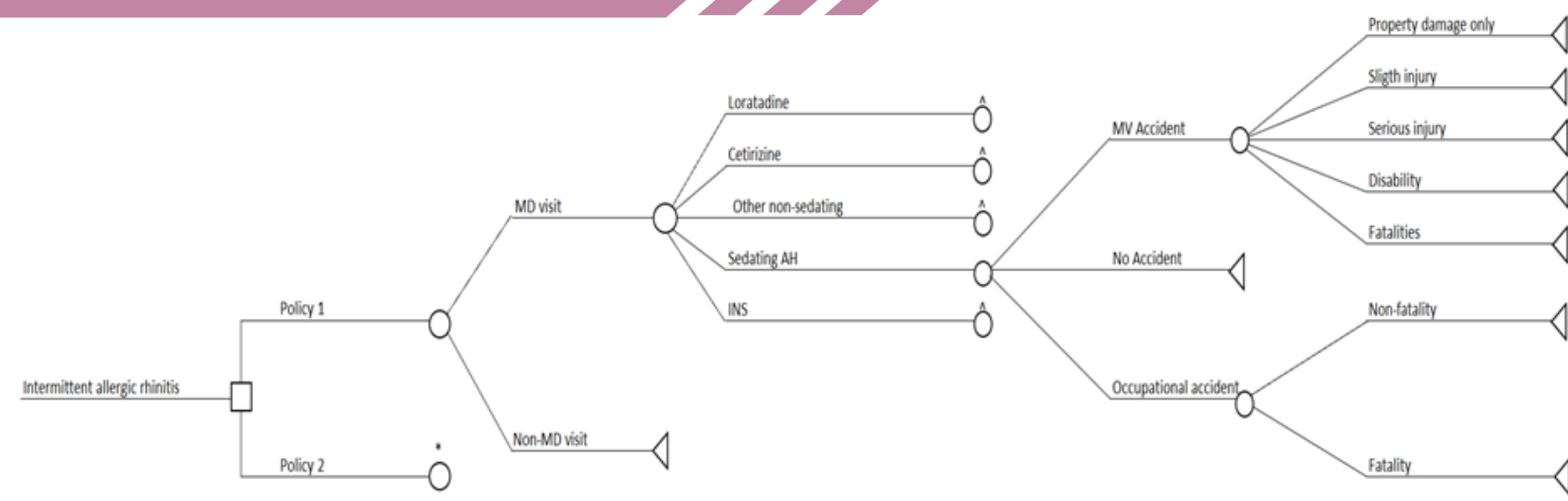
## Introduction

- Thailand's health insurance system provides pharmaceutical benefits which include prescription and non-prescription (OTC) drugs.
- With the system's limited budget, access to many high-cost drugs for catastrophic diseases is inadequate.
- To solve this issue, we propose that Thailand should cease OTC drug reimbursement to allow resources to go to catastrophic disease medicines. However, the consequences of policy implementation is in doubt.

## Objective

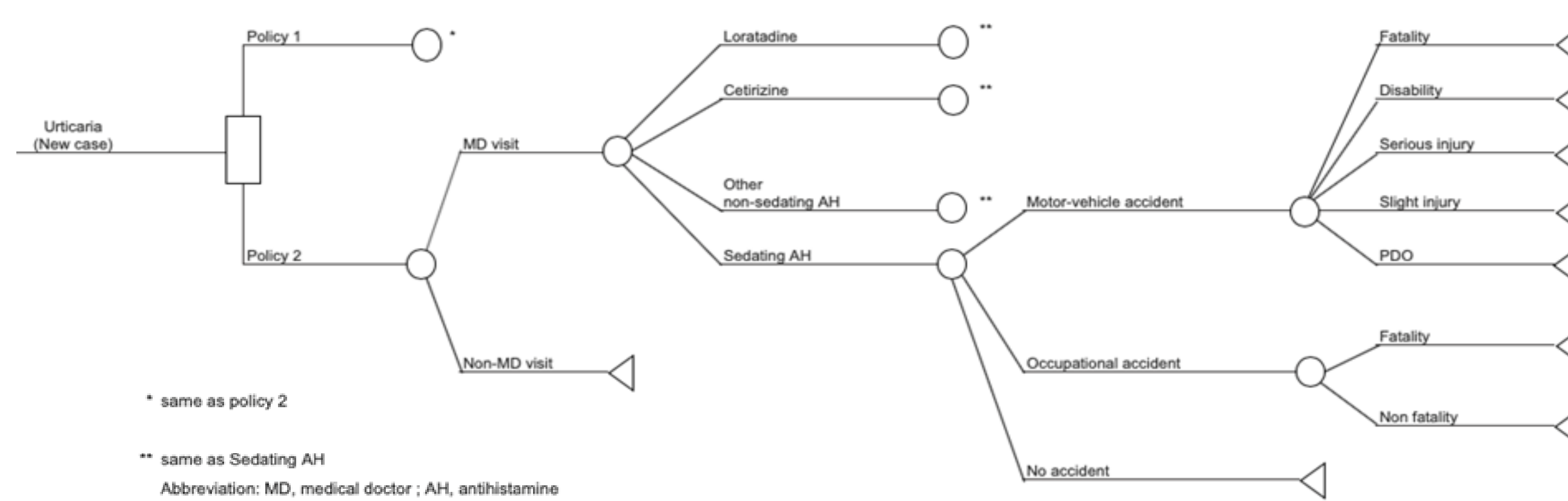
To examine the economic impact of abandoning OTC drug reimbursement by using currently reimbursable non-sedating antihistamines for intermittent allergic rhinitis and acute urticaria.

## Methods



\* Same as policy 1  
\* Sum as sedating AH  
Abbreviation: MD, medical doctor; AH, antihistamines; NS, intranasal corticosteroids; MV accident, motor-vehicle accident.

A. Decision tree model for intermittent allergic rhinitis



\* same as policy 2  
\*\* same as Sedating AH  
Abbreviation: MD, medical doctor; AH, antihistamine

B. Decision tree model for acute urticaria

Figure 1 The decision tree model of policy options for reimbursement and non-reimbursement of non-sedating antihistamines for A. Intermittent allergic rhinitis and B. Acute urticaria.

## Results

Assuming loratadine and cetirizine were no longer reimbursed, and doctor visits were decreased from 70% to 30%, Thailand would save **82.56 million USD** (72.39 million USD from intermittent allergic rhinitis and 10.17 million USD from acute urticaria)

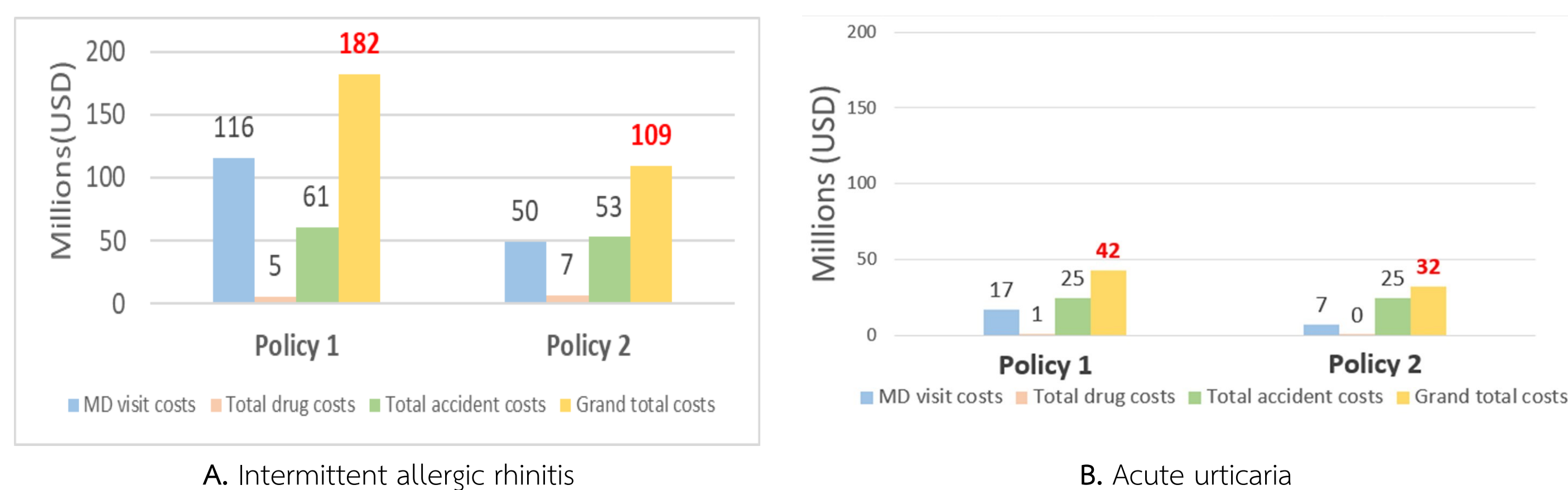


Figure 3 Bar chart demonstrating cost components of each policy from A. Intermittent allergic rhinitis and B. Acute urticaria.

From Figure 3, Main cost components of both policies that most affect cost saving are MD visit costs and Total accident costs from sedating antihistamines.

## Discussion and Conclusion

- Using decision tree model, ceasing loratadine and cetirizine coverage in patients suffering from intermittent allergic rhinitis and acute urticaria can produce substantial cost-saving for healthcare system, only if hospital visits decrease to a particular point, and could free resources for catastrophic illness.
- More campaigns regarding patients' self-care empowerment are needed to help decrease hospital visits.
- Thai policymakers should reconsider current health insurance philosophies concerning which benefits insurers should provide eligible customers.

## Flow chart of the methodology



Figure 2 Flow chart of the methodology of this study

## Sensitivity analysis

Univariate sensitivity analysis shows that decreased numbers of doctor visits were central to cost reduction when visits were down to 49.86% and 39.46% among intermittent allergic rhinitis and acute urticaria patients, respectively. If not, the expenditures would increase more than the present policy due to increase of total drug expenses.

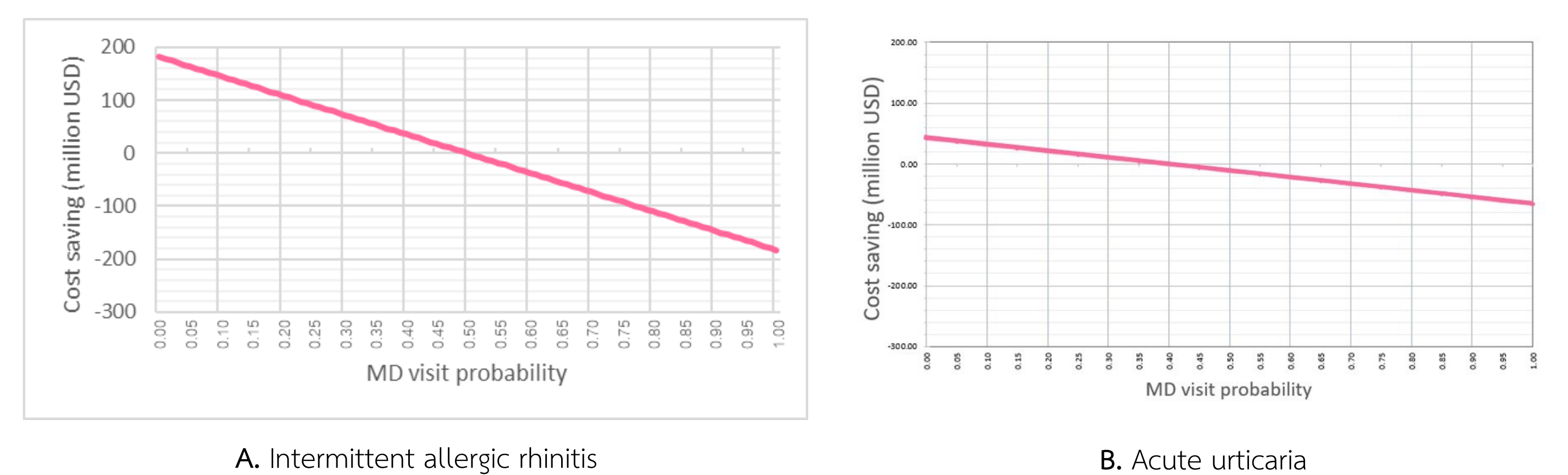


Figure 4 Line graph presenting univariate sensitivity analysis between MD visit probability and cost-saving from A. Intermittent allergic rhinitis and B. Acute urticaria.