

# A Study on the Factors Influencing the Participation in Health Insurance of Coastal Residents in Thanh Hoa Province, Vietnam

Tuan Minh Hoang<sup>1</sup>, Nga Thi Nguyen<sup>2</sup>

<sup>1</sup>Insurance Department, <sup>2</sup>Accounting Faculty;  
University of Labour and Social Affairs, Hanoi, Vietnam.

Corresponding Author: Nga Thi Nguyen

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## ABSTRACT

According to statistical data, the participation rate in health insurance among residents in coastal areas of Thanh Hoa province is currently around 87.5%. While this is a relatively high participation rate, it is lower than the national average. Therefore, it is crucial to study the factors that influence the participation of coastal residents in order to improve the coverage of health insurance for them.

To encourage participation in health insurance, it is important to clarify the role of health insurance in people's lives, improve the quality of health insurance services, and reduce administrative procedures. These factors contribute to stimulating the participation of coastal residents. One of the reasons why people have not decided to spend their own money to purchase health insurance is the lack of trust in the quality of health insurance services. In other words, the attractiveness of health insurance policies and the implementation of these policies are important factors that influence people's participation in health insurance.

Identifying the factors that influence the participation in health insurance of coastal residents in Thanh Hoa is not only the basis for assessing the level of participation but also essential for proposing specific solutions to enhance their participation.

**Keywords:** Health insurance, health, social insurance, Medical Management, Vietnam.

## INTRODUCTION

Health insurance policies in Vietnam are well managed. The evidence of this is the high coverage rate of nearly 92% in 2023, which clearly demonstrates the issue of citizen participation. However, different regions with varying economic and social characteristics may have different levels of participation. Research on the participation in health insurance by residents in coastal areas of Thanh Hoa province will assist policymakers in formulating strategies to further increase the coverage rate within Vietnam's health insurance system.

A total of 421 usable surveys were included in the data analysis. Respondents included 14.3% of doctors and 72.9% of nurses/midwives. Overall, 69.4% were female, 85% were educated in Australia with 35% and 51.4% had knowledge or personal contact with AA in general. More than 60% of respondents agreed AA should be regularly integrated into perioperative care, and more than 80% would recommend AA to their patients if it was offered at their hospital, and 75% would be willing to take on the task. At the same time, they believe that if doctors have a high level of expertise, they will attract more patients to seek medical treatment, regardless of whether they are covered by public health insurance or private health insurance. (Ming Zhang M.H.Sc, David Daly M.S.C.E, Morne Terblanche M.H.M,

Sumati Joshi MD, Mark Tacey Mbiosta, Gillian Vesty Ph.D, Gillian Vesty Ph.D, Zhen Zheng Ph.D. 2022)<sup>[1]</sup>. Positive attitudes have been reported by Australian doctors and nurses towards individuals with Alcoholics Anonymous (AA), regardless of their low level of knowledge or personal contact with AA. Further research is needed to explore the implementation of barriers and the professional response of healthcare providers in the healthcare system towards patients with AA.

The results show that in general, employees utilize more inpatient services and receive more reimbursement than residents. However, after the policy change, the medical insurance benefits for residents greatly improved. Thus, they significantly increased their frequency of inpatient utilization and used more services per admission, which increased total inpatient expenditure and reimbursement by 10.65% and 9.94%, respectively. However, the corresponding figures for employees remained at their historical levels, thus reducing the health care disparities between these two groups. These findings provide empirical evidence to support the integration of the social medical insurance system in China and can serve as a reference for governments in low- and middle-income countries seeking to improve equality in their medical security systems. (Wen He, 2023)<sup>[2]</sup>

In Vietnam, the current healthcare insurance system focuses on the benefits of participants as an important criterion for policy development. Despite various adjustments made to benefit the participants, it still hasn't gained significant attractiveness among many people. This is mainly due to several reasons, including the psychological mindset of healthcare insurance participants, the limited scope of medical support for all patients, and the lack of transparency in medical treatment. Additionally, the healthcare examination process still involves many procedures. Further reforms are needed to expand the coverage of the healthcare system,

particularly for specific participant groups such as residents in coastal areas.

## LITERATURE REVIEW

We study the impact of health insurance expansion on medical spending, longevity and welfare in an OLG economy in which individuals purchase health care to lower mortality and medical progress is profit-driven. Three sectors are considered: final goods production; a health care sector, selling medical services to individuals; and an R&D sector, selling increasingly effective medical technology to the health care sector. We calibrate the model to the development of the US economy/health care system from 1965 to 2005 and study numerically the impact of the insurance expansion. We find that more extensive health insurance accounts for a large share of the rise in US health spending but also boosts the rate of medical progress. A welfare analysis shows that while the subsidization of health care through health insurance creates excessive health care spending, the gains in life expectancy brought about by induced medical progress more than compensate for this. (Ivan Frankovic, Michael Kuhn.(2023)<sup>[3]</sup>

The costs include activation cost of inventory, sterilization and collection centers, transportation cost, purchasing cost of medical supplies, municipality cost for destruction of medical waste, etc. The second objective is to reduce biological risks. The primary source of infectious medical supplies is from disposable supplies and equipment. Thus, the second objective function is to minimize the distance and travel time between the clinic and the sterilization center. This study also highlights that ensuring adequate medical supplies will contribute to improved healthcare services, meeting the needs of insurance participants. (Mehdi Alizadeh , Ahmad Makui , Mohammad Mahdi Paydar (2020)<sup>[4]</sup>

Continuous treatment with drugs is an inevitable prerequisite for many clinical conditions, such as chronic inflammatory diseases, pain, or depression. However, the amount of adverse side effects induced by opioids, antidepressants, or immunosuppressive drugs urges the need for developing alternative or supportive treatment strategies. In this context, conditioned pharmacological effects, obtained by means of associative learning, have been successfully implemented as controlled drug-dose reduction strategies to maintain and strengthen the efficacy of medical treatments. Such approaches have been proven effective in experimental animals, healthy subjects, and patient populations. Thus, a systematic use of conditioned pharmacological effects should be seriously considered as a supportive treatment option to optimize pharmacological treatment effects for the patients benefit. (Martin Hadamitzky, Manfred Schedlowski (2022))<sup>[5]</sup>

This article discusses key policy questions around health system financing in humanitarian settings, with specific reference to the Eastern Mediterranean region. We discuss key financing functions in the context of different challenges and the potential policy options for addressing these effectively. We also identify areas of collaborative research between academics, policy- and decision-makers and other stakeholders to inform appropriate policy choices that are aligned to universal health care. (Sumit Mazumdar PhD, Rana Hajjeh MD, PhD, Rick Brennan MBBS, MPH, Awad Mataria PhD, (2024))<sup>[6]</sup>.

Evidence shows high levels of catastrophic and impoverishing healthcare expenditure among households in sub-Saharan Africa (SSA). The way healthcare is financed has an impact on how well a health system performs its functions and achieves its objectives. This study aims to examine the effect of healthcare financing policy tools on health system efficiency. (Kwadwo Arhin, Eric Fosu Oteng-Abayie, Jacob Novignon.(2023))<sup>[7]</sup>

UN member states have committed to universal health coverage (UHC) to ensure all individuals and communities receive the health services they need without suffering financial hardship. Although the pursuit of UHC should unify disparate global health challenges, it is too commonly seen as another standalone initiative with a singular focus on the health sector. Despite constituting the cornerstone of the health-related Sustainable Development Goals, UHC-related commitments, actions, and metrics do not engage with the major drivers and determinants of health, such as poverty, gender inequality, discriminatory laws and policies, environment, housing, education, sanitation, and employment (Téa E Collins DrPH, Svetlana Akselrod MD, Rifat Atun MBA, Sara Bennett PhD).(2023)<sup>[8]</sup>

Surgical care is a significant component of the overall health expenditure in low- and middle-income countries. In Cameroon, out-of-pocket payments for surgical service are very high with many patients declining potentially curative surgical procedures. Less than 2% of the population is enrolled in a health insurance scheme leading to a propensity for catastrophic health expenses when accessing care. To assess the perceived barriers and motivations for health insurance subscription among health-care users in Cameroon. (Odette.D. Kibu PhD, Evrard Kegang MSc, Regina Sinsai BA, Anna Conner BS, Constantine Asahngwa PhD, Wilfred Ngwa MSc. (2024))<sup>[9]</sup>

This article presents the results of an international comparative study of a widely neglected element in social health insurance: supervision upon the sickness funds as implementing agents of social health insurance. The following countries were included: Belgium, Germany, Switzerland and the Netherlands. A comparative analysis of the institutional structure of supervision revealed many differences. The goals of supervision are more or less the same in each country: preserving the lawfulness of

implementation; ensuring trust and stability; preserving efficiency and supporting policymaking. The analysis of the supervision process focused upon three sub-processes: the collection of information; the assessment of the performance of the sickness funds and interventions to correct deviant behaviour. Finally, the analysis deals with changes in supervision, in particularly the impact of market competition in social health insurance upon supervision. It is argued that market competition will substantially alter the role of supervisory agents in social health insurance. (Hans Maarse, Aggie Paulus, Gerard Kuiper. (2005)<sup>[10]</sup>)

## MATERIALS & METHODS

Based on preliminary surveys conducted with experts, managers, as well as qualitative surveys, the authors have

concluded that the factors influencing the participation of coastal residents in health insurance include: 1. Doctor's qualifications; 2. Healthcare services; 3. Medicine and medical supplies; 4. Healthcare financing; 5. Administrative procedures; 6. Inspection and supervision. A 5-point Likert scale was used to collect information to measure and evaluate the effectiveness of policy management. The survey was distributed to 252 coastal residents in Thanh Hoa province.

The administrative units included in this study in Thanh Hoa province are Nghi Son, Quang Xuong, Hoang Hoa, Hau Loc, Nga Son, and Sam Son. These coastal administrative units have residents who participate in health insurance and are relevant to the research topic. Specifically, through the following tables:

**Table 1. Breakdown of survey participants by survey unit and gender**

Serial number	Unit	Quantity (Number of people)			Composition (%)		
		Male	Female	Total	Male	Female	Total
1	Nghi Son	15	20	35	42,8	57,2	100.0
2	Quang Xuong	25	20	45	55,5	44,5	100.0
3	Hoang Hoa	17	25	42	40,4	59,6	100.0
4	Hau Loc	30	30	60	50	50	100.0
5	Nga Son	37	11	48	77	23	100.0
6	Sam Son	7	15	22	31,8	68,2	100.0
7	Total	131	121	252	52.0	48.0	100.0

**Table 2. Breakdown of survey participants by survey unit and age group**

Unit	Quantity (Number of people)					Composition (%)				
	From 24 to 30	From 31 to 40	From 41 to 50	From 51 to 60	Total	From 24 to 30	From 31 to 40	From 41 to 50	From 51 to 60	Total
Nghi Son	5	7	15	8	35	14.2	20	42.8	23	100
Quang Xuong	10	7	17	11	45	22.2	15.5	37.7	24.6	100
Hoang Hoa	7	10	15	10	42	16.6	23.8	35.8	23.8	100
Hau Loc	9	14	20	17	60	15	23.3	33.3	71.6	100
Nga Son	8	20	15	5	48	16.6	41.6	31.2	10.6	100
Sam Son	3	6	9	4	22	13.6	27.2	40.9	18.3	100
<b>Total</b>	<b>42</b>	<b>64</b>	<b>91</b>	<b>55</b>	<b>252</b>	<b>16.6</b>	<b>25.3</b>	<b>36.1</b>	<b>22</b>	<b>100</b>

## RESULT

To analyze the level and order of influence of independent variables on the participation in health insurance of coastal residents in Thanh Hoa, the study used a standardized regression equation. From the result table, it can be seen that the larger the standardized regression coefficient, the stronger the (%) influence of the independent variables on the dependent variable. The results of the

standardized regression show that the first factor group (Doctor's qualifications) has the highest level of influence on current health insurance participation, followed by the factor group related to the Medicine and medical supplies (Factor group 3), and the factor group with the weakest impact is the administrative procedures group (Factor group 5) in health insurance participation. Shown by the following table:

**Table 3. The results of standardized regression on the factors influencing the participation in health insurance of coastal residents in Thanh Hoa**

Factors	Healthcare services	Medical treatment	Preventive healthcare	Government support	Affordability	Participation in health insurance
Factors 1	.450	.447	.426	.502	.278	.520
Factors 2	.190	.230	.148	.302	.160	.257
Factors 3	.362	.424	.356	.338	.170	.404
Factors 4	.182	.115	.301	.237	.038	.212
Factors 5	.122	.097	.130	.062	.133	.137
Factors 6	.155	.263	.059	.096	.353	.241

The authors will use the Cronbach alpha statistical test. When the Cronbach alpha coefficient has a value of 0.8 or higher to nearly 1.0 is a good scale; a Cronbach alpha coefficient of 0.6 or higher is usable in the case of a new concept (Robert A. Peterson. (1994) <sup>[11]</sup>. Through the tests of the composition of 6 factors (Doctor's

qualifications; Healthcare services; Medicine and medical supplies; Healthcare financing; Administrative procedures; Inspection and supervision) affecting social insurance policy management all have Cronbach's Alpha coefficients greater than 0.8. so these variables will be used for further analysis.

**Table 4. Determine the importance of independent variables in the model Unit (%)**

Factors	Healthcare services	Medical treatment	Preventive healthcare	Government support	Affordability	Participation in health insurance
Factors 1	30.79	28.35	29.97	32.65	24.56	29.36
Factors 2	13.00	14.62	10.42	19.64	14.13	14.53
Factors 3	24.80	26.93	25.10	21.97	14.99	22.80
Factors 4	12.47	7.28	21.22	15.44	3.36	11.99
Factors 5	8.33	6.15	9.13	4.02	11.76	7.73
Factors 6	10.61	16.67	4.16	6.28	31.20	13.59

The results of the multiple regression analysis have determined the factors influencing the participation in health insurance (BHYT) of coastal residents in Thanh Hoa, ranked in order of their impact from strongest to weakest. These factors are as follows:

Doctor's qualifications (contributing 29.36%)  
 Medicine and medical supplies (contributing 22.80%)  
 Healthcare services (contributing 14.53%)  
 Inspection and supervision of health insurance (contributing 13.59%)

Healthcare financing (contributing 11.99%)  
Administrative procedures for health insurance participation (contributing 7.73%)

## DISCUSSION

To achieve the goal of building a modern and professional health insurance service that aims to satisfy the people and create a sustainable national social security system, it is crucial to strengthen the communication efforts related to health insurance. More than ever, there is a need to innovate the communication strategies and approaches in response to the new circumstances. Therefore, the communication efforts in the field of health insurance need to be renewed and improved.

Medicine is a special commodity that requires attention to two key issues: drug prices and drug quality. Drug prices affect the costs of the health insurance fund, while drug quality directly impacts treatment outcomes, thereby influencing patient satisfaction levels. Therefore, it is necessary to include drugs and pharmaceutical products within the scope of state-managed goods in terms of quality and pricing. This approach not only reduces the financial burden on the health insurance fund but also enhances the quality of disease treatment, providing reassurance for the general population and the coastal communities in using medication for their health treatment. Reforming the financial mechanism towards accurate and sufficient pricing of healthcare services is aimed at gradually reducing the reliance on state budget allocation to healthcare facilities and shifting towards supporting payment contributions by health insurance participants. This approach aims to incentivize healthcare facilities to improve the quality of healthcare services, ensure fairness in evaluating the effectiveness of operations among healthcare facilities nationwide, safeguard the rights of health insurance cardholders, and promote health insurance participation. Controlling and addressing the unintended consequences of hospital autonomy, such as increasing transparency and financial

disclosure, is important. It involves developing monitoring and evaluation indices to measure the performance of hospitals alongside strengthening hospital information management systems.

## CONCLUSION

The survey sample size was 252 questionnaires collected from coastal districts in Thanh Hoa, which served as the basis for analysis. The analysis results revealed that each district had different barriers to health insurance participation among coastal residents. Statistics showed that residents identified factors influencing their health insurance participation, such as the qualifications of healthcare staff, healthcare services, medicine and medical supplies, healthcare financing, inspection and supervision of health insurance. These findings will serve as references for developing appropriate solutions.

Based on the results of the analysis of factors affecting the participation in health insurance among coastal residents in Thanh Hoa, the authors propose a system of feasible solutions to increase health insurance participation in these areas. These solutions include enhancing administrative procedure reforms, utilizing information technology in the field of health insurance, regularly supplementing and monitoring the medicine and medical supplies list, innovating and diversifying health insurance payment methods, reforming financial mechanisms to ensure the correct and sufficient pricing of healthcare services, designing appropriate healthcare service packages, investing in and upgrading healthcare infrastructure and equipment, constructing and investing in additional hospital beds and satellite facilities, and increasing the quantity and improving the quality of healthcare professionals and staff's expertise and attitude.

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