The CPCE conference 2021
Post-pandemic health and long-term care: A new paradigm

Mahidol University
Wisdom of the Land

# Acceptability and willingness to pay for influenza vaccination among Healthcare professional in Vietnam


PRESENTED BY

MS. NGUYEN THI THU TRANG

ASEAN INSTITUTE FOR HEALTH DEVELOPMENT,

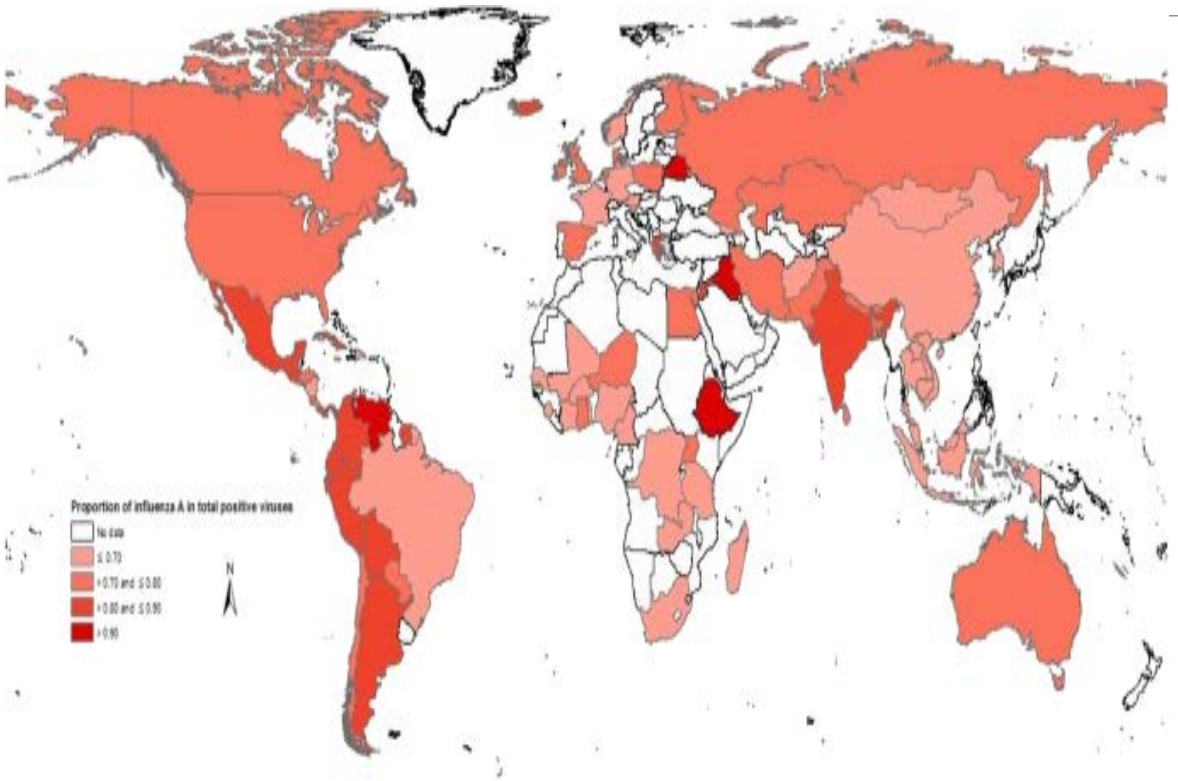
MAHIDOL UNIVERSITY, THAILAND

# Biography

Mahidol University
Wisdom of the Land

- Nguyen Thi Thu Trang
- Hanoi, Vietnam
- M.D
- The University of Medicine and Pharmacy, Thai Nguyen University, Vietnam
- Master of Primary Health Care Management
- ASEAN Institute for Health Development, Mahidol University
- Interest: Primary Health Care, Public Health

# Background and rationale




Global pattern of influenza A proportion

Sources: Global dynamic spatiotemporal pattern of seasonal influenza since 2009 influenza pandamic

## EACH YEAR IN GLOBAL

- Influenza causes 3-5 millions severe cases
- 290,000 to 650,000 deaths

Mahidol University
Wisdom of the Land

# Background and rationale

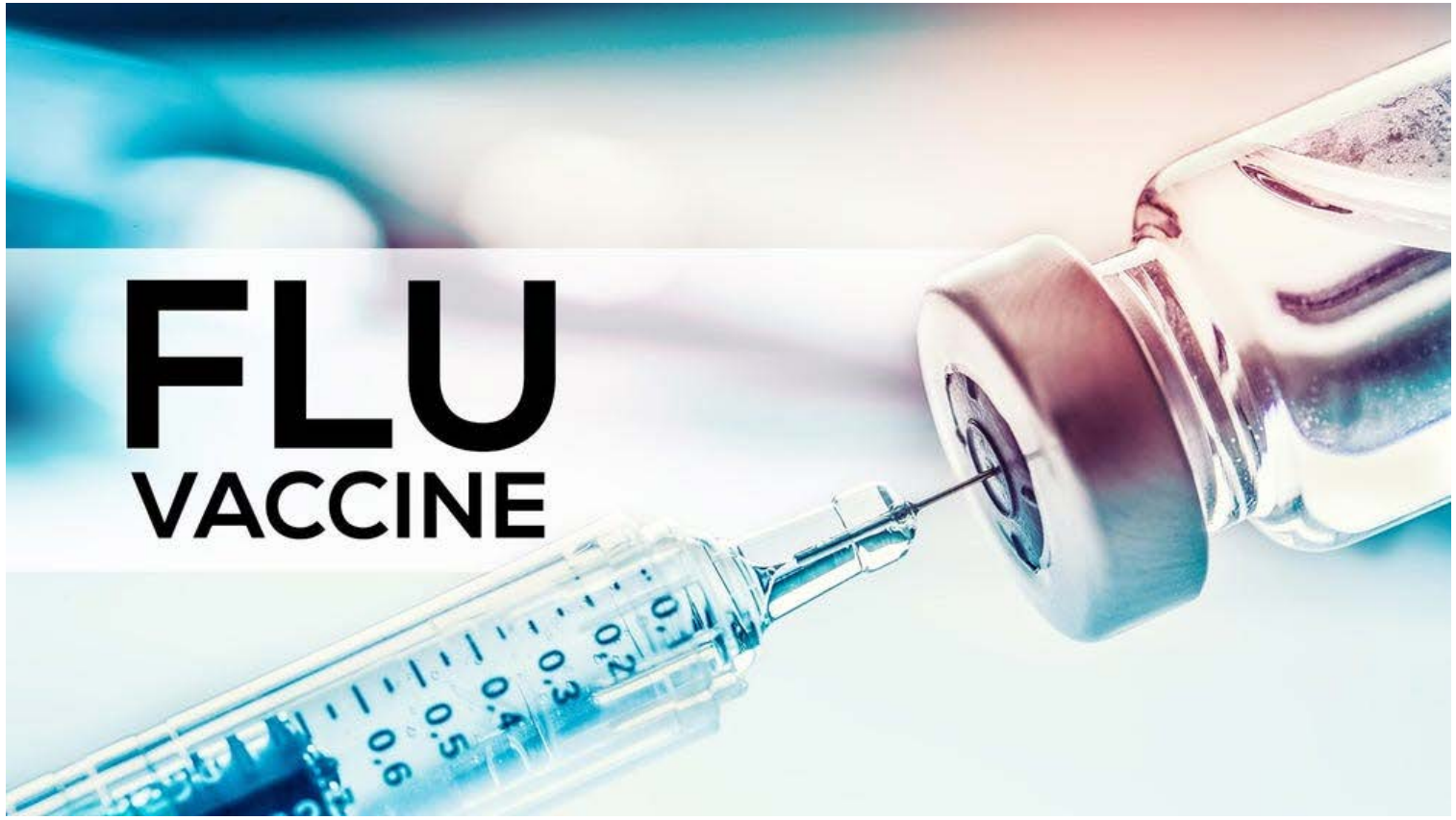
South-East Asia: mortality rate 3.5-9.2/100.000 individuals

Vietnam: 22 % of patients of ILI were influenza positive

9.3 % report hospitalized

# Background and rationale

Influenza vaccine is the most effective way to prevent Flu



Mahidol University
Wisdom of the Land

# Background and rationale

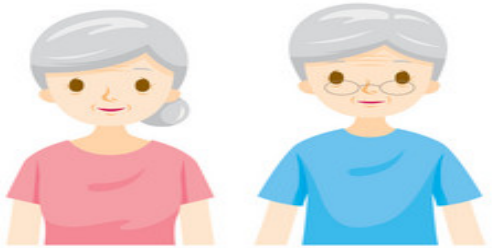
- Updated every year
- Contain the common subtypes of the upcoming season (A-H1N1, A-H3N2, B)
- CDC recommend influenza vaccine for people from 6 months
- Strongly recommend for high-risk group

Mahidol University
Wisdom of the Land

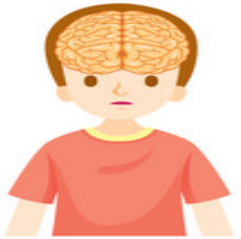
# PEOPLE at HIGH RISK for FLU COMPLICATIONS

Pregnant women

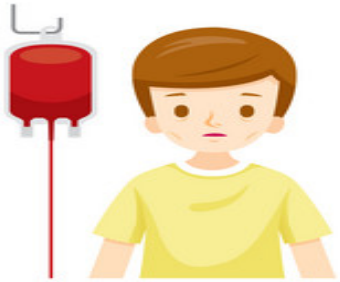
Children over 6 months



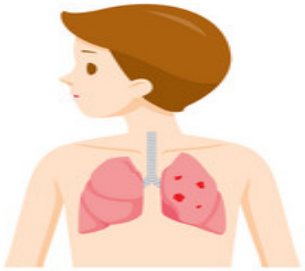
The elderly



People with aphasia
who can't help themselves



Thalassemia patients
Immunosuppressed patients
HIV infected patients



Chronic diseases patients

Weight over 100 kilograms
or body mass index from
35 kilograms per square meter

Health care workers

Mahidol University
Wisdom of the Land

# Background and rationale

- In Southeast Asia, Influenza vaccine (IV) was sole for less than 1000/100.000 or 1% of population
- In Vietnam, Influenza vaccine (IV) is not included in EPI program
- People pay OOP for IV
- The vaccine price is high
- Local IV: $5,2-7,8. Imported IV: $11,9-14,4
- Basic salary: $65

Mahidol University
Wisdom of the Land

# Background and rationale

- Healthcare professionals (HPs): high risk of contracting influenza virus
- Vaccinate HPs: protect their patients, colleagues and families
- HPs: recommend IV to their patients
- SIV rate of HPs remain low (48% in Vietnam, 2017)

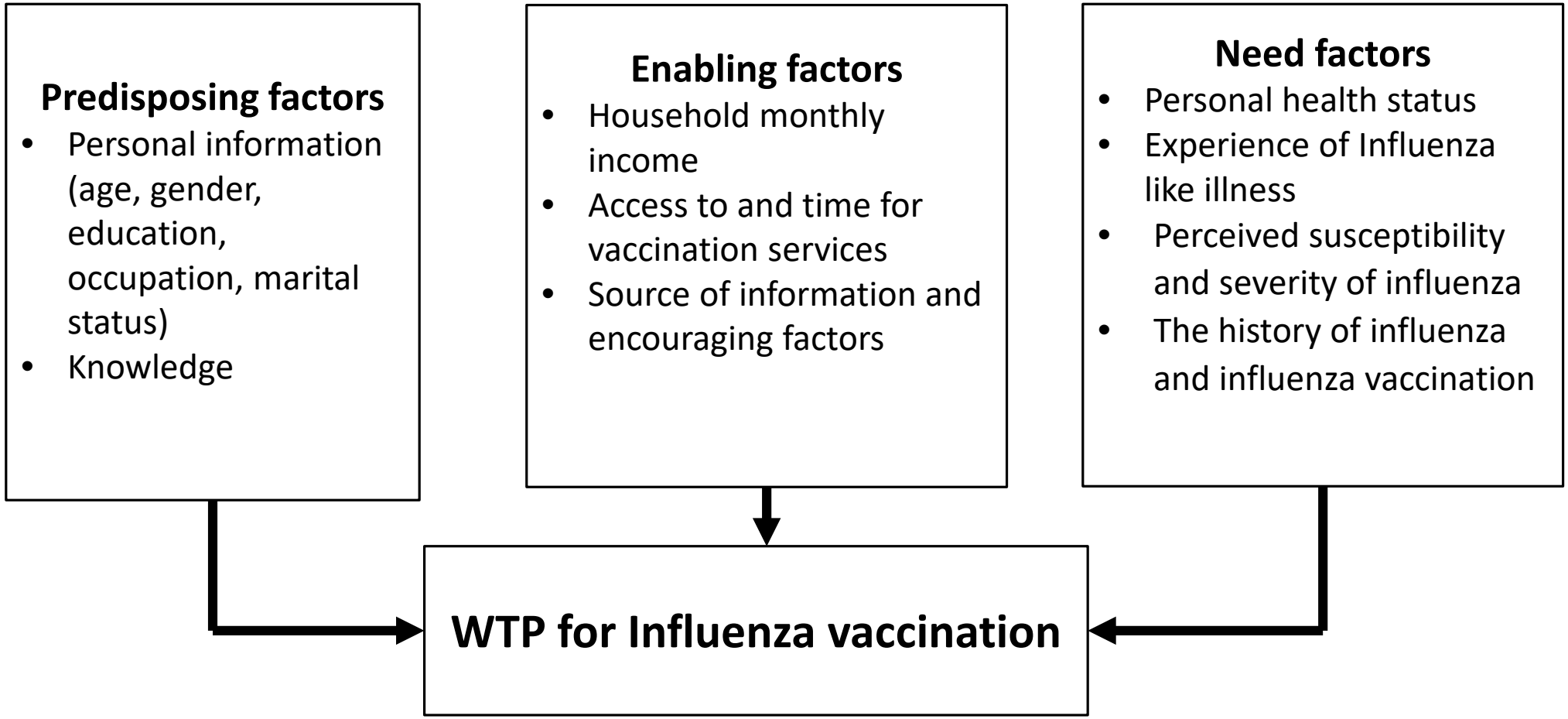
# Objective

Examine the willingness to pay (WTP) for influenza vaccination and factors affecting WTP and influenza vaccine uptake among health care professionals in Vietnam.

Recommend financing sources for influenza vaccination among healthcare professionals and determines feasible measures to expand vaccine coverage

Mahidol University
Wisdom of the Land

# Conceptual framework



# Contingent valuation method and WTP for IV

- CV: determine the benefits and WTP for products or programmes including HC sector
- The results : use in cost-benefit analysis or economic evaluation of HC programmes and products
- CV: estimate the monetary benefits of many vaccines
- WTP: the maximum price a customer is willing to pay for IV, differ from country to country

Mahidol University
Wisdom of the Land

# Methodology: study design

CROSS-SECTIONAL

QUANTITATIVE

FACE-TO-FACE INTERVIEW

USING STRUCTURED QUESTIONNAIRE

# Methodology: study area

- The National hospital for tropical disease
- General hospital
- Focus on infectious diseases
- Frontline against Covid-19
- 850 beds

# Methodology: study instrument

| Parts | Contents | Items |
|---|---|---|
| 1 | Predisposing factors | 11 |
| 2 | Enabling factors | 8 |
| 3 | Need factors | 7 |
| 4 | Acceptability of influenza vaccination and WTP | 8 |
| 5 | Recommend financing sources for influenza vaccination | 4 |

# Methodology: Data procedure & analysis

Mahidol University
Wisdom of the Land

Step1: Pre-data collection

The Rapid assessment (July 2021)

- IPSRIRB approval 2021/06-136
- IRB approval from the hospital

Step 2: Face to face interview

The National Hospital for Tropical Diseases
Healthcare professionals
130 participants

- Inclusion criteria
- Exclusion criteria

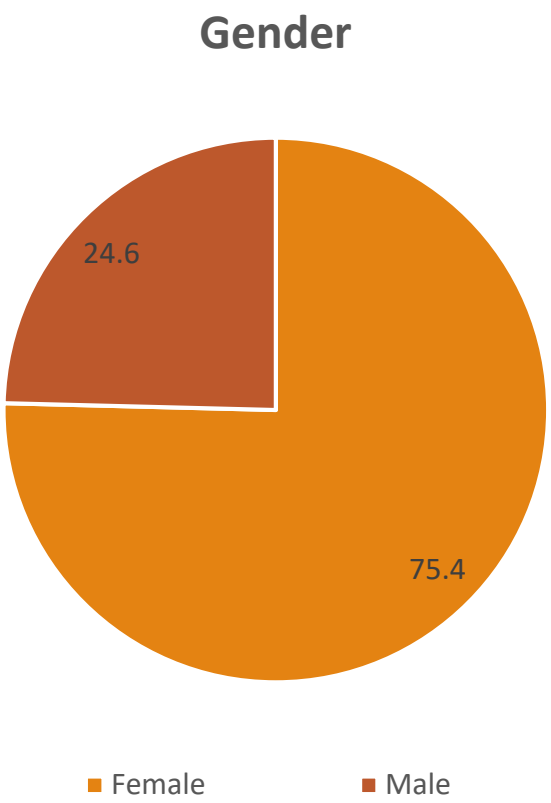
Data collection
Face to face interview

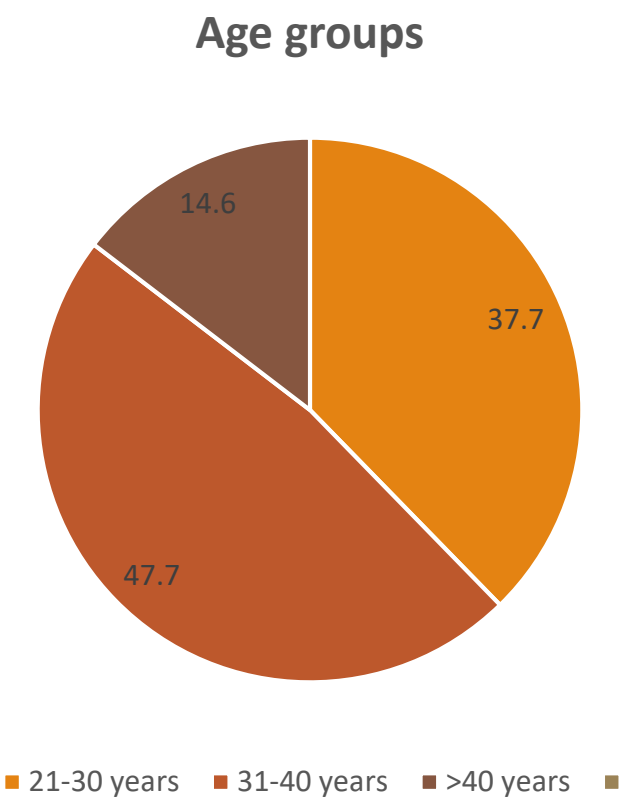
Step 3: Evaluation & Report

Data analysis (**SPSS version 20**)
Descriptive statistics, Chi-square

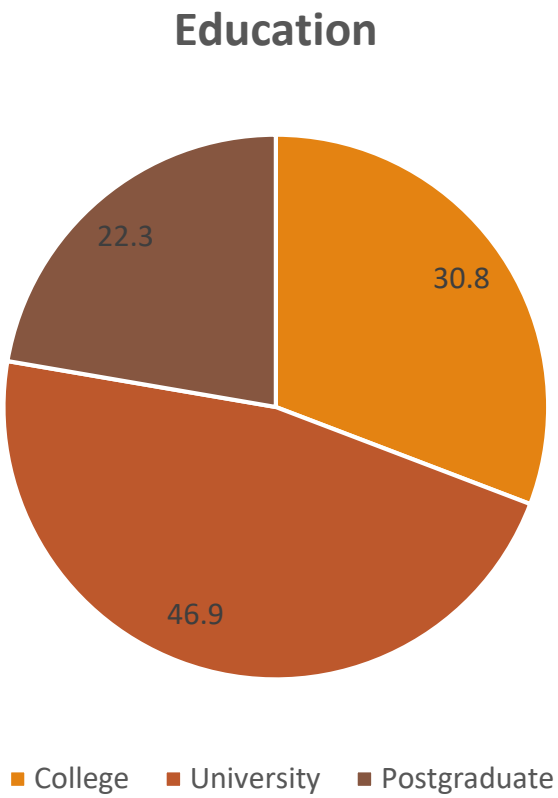
**Results, Discussion, Conclusion**

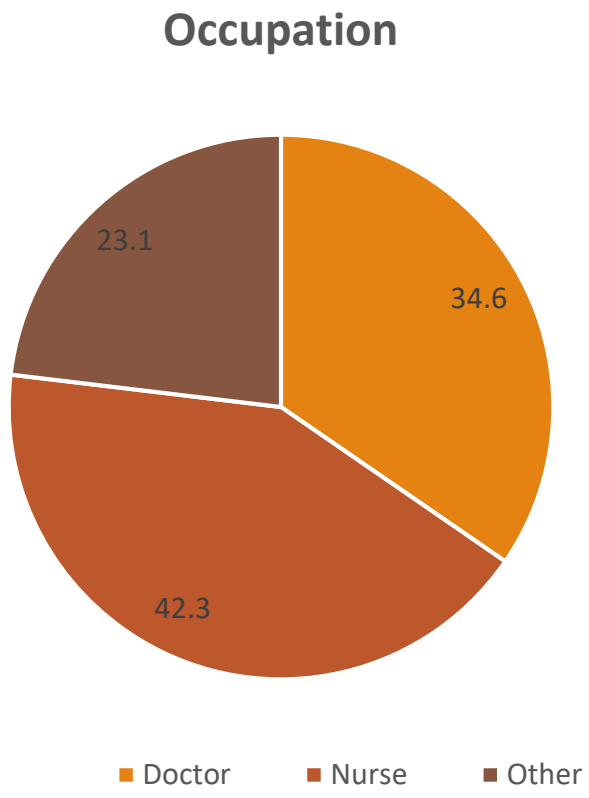
# Results: Characteristics of respondents (n=130)



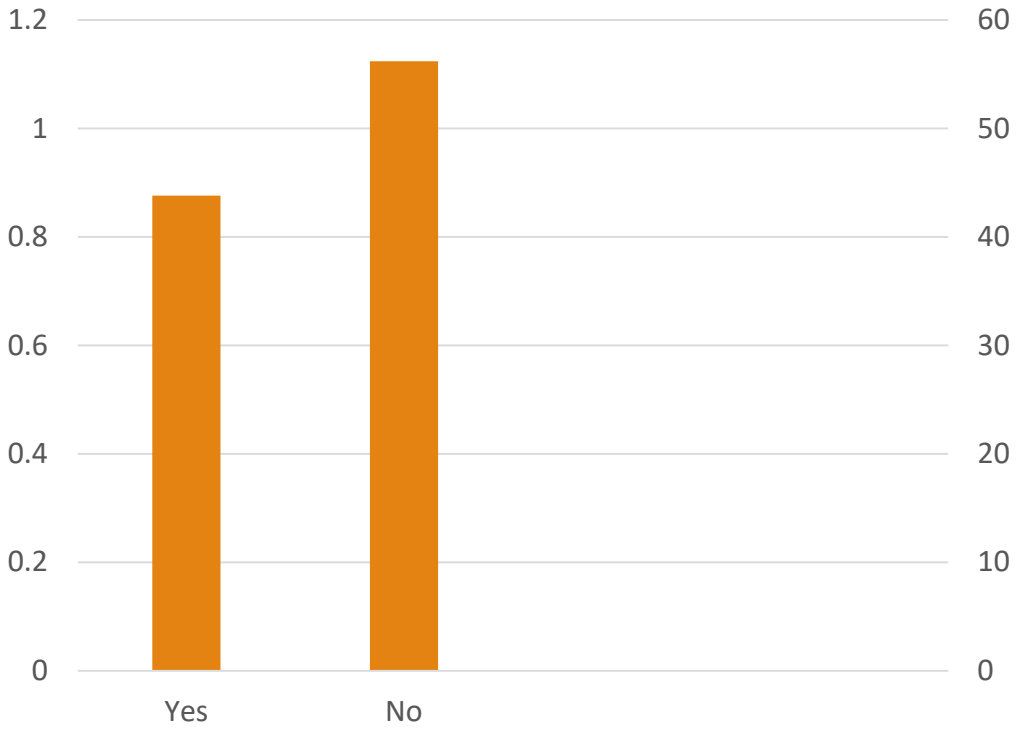



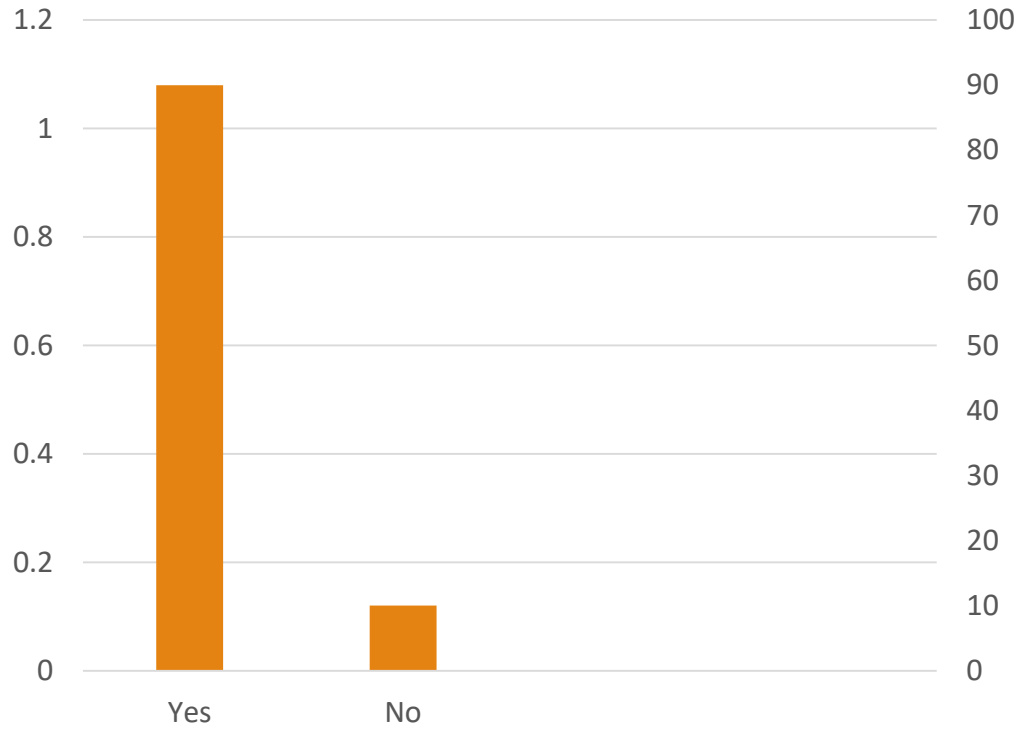
# Results: Characteristics of respondents (n=130)



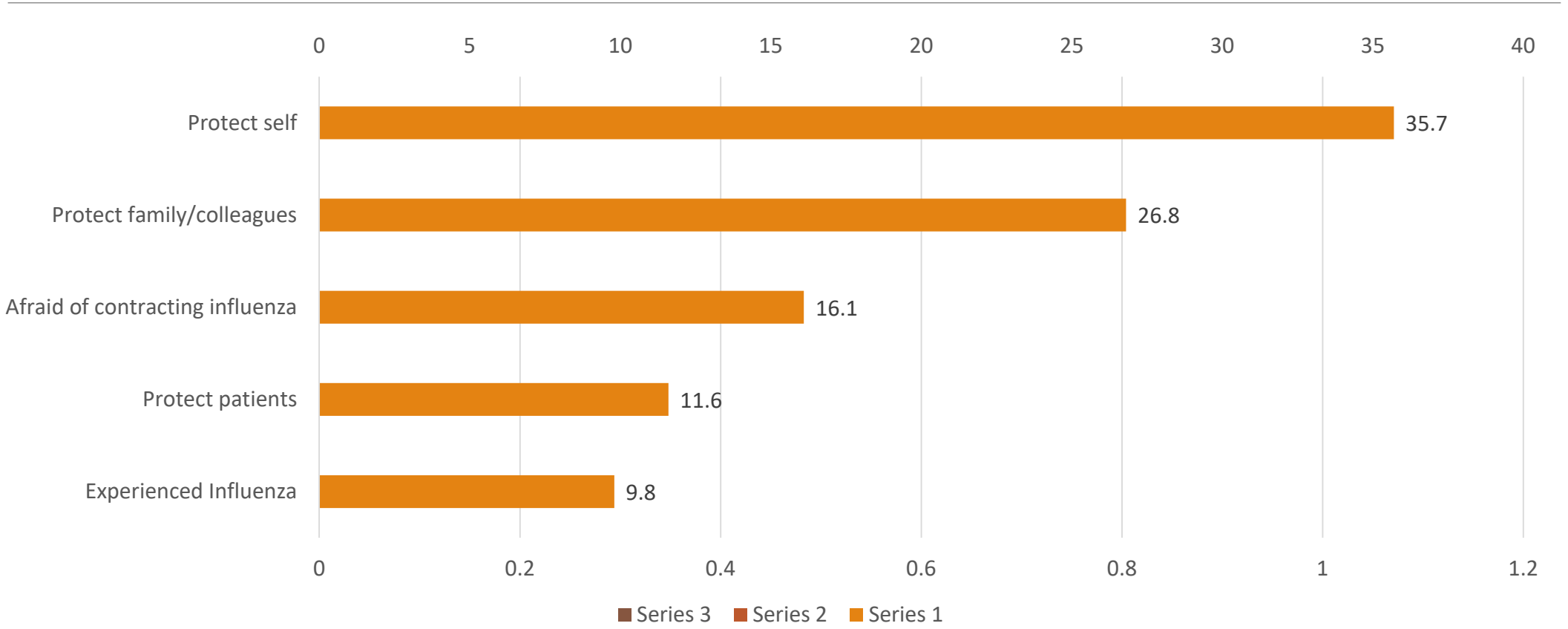
# Results: Knowledge about Influenza vaccination (n=130)



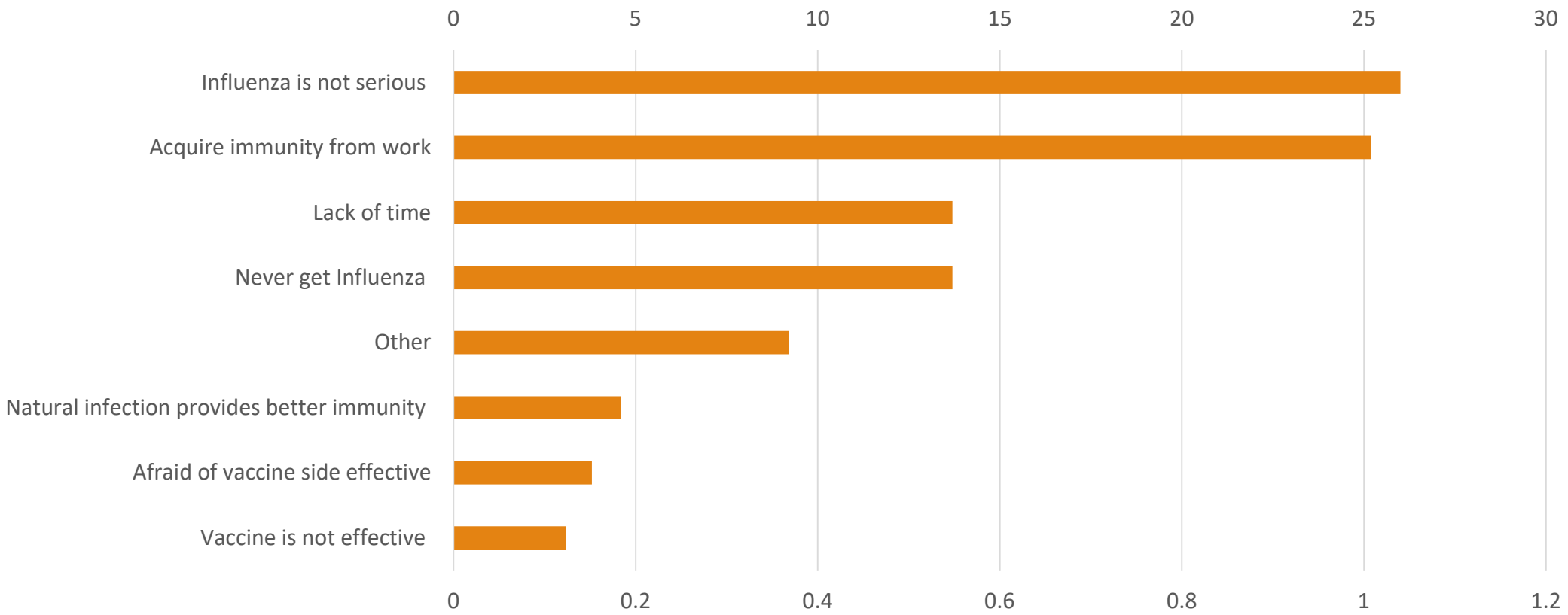



Mahidol University
Wisdom of the Land

# Results: Reasons for getting Influenza vaccination(n=130)



# Results: Reasons for not getting Influenza vaccination (n=130)

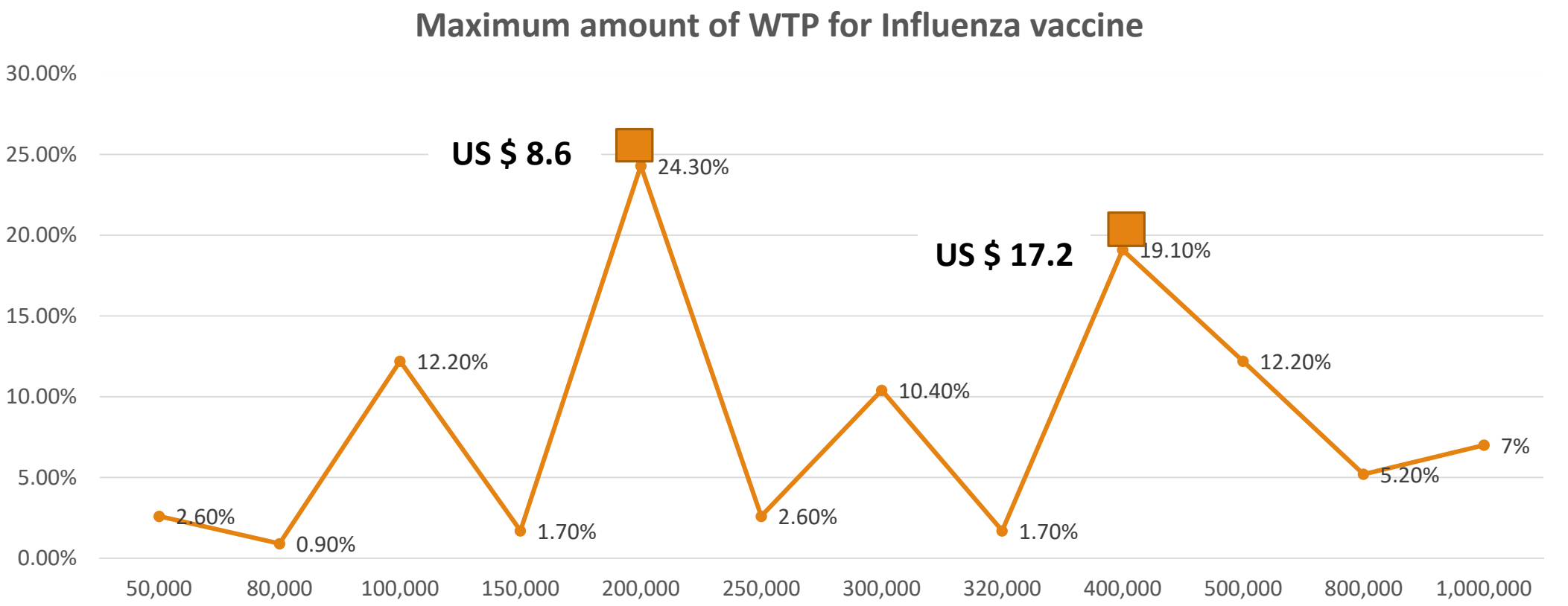


Mahidol University
Wisdom of the Land

# Results: Maximum amount of WTP for Influenza vaccination (n=115)

| | N | Minimum | Maximum | **Mean** | Std. Deviation |
|---|---|---|---|---|---|
| 33_Maximum price | 115 | 50,000 VND (US $ 2.15 ) | 1,000,000 VND (US $ 43) | **357,565.22 (US $ 15.37** ) | 246,877.309 |
| Valid N (listwise) | 115 | | | | |

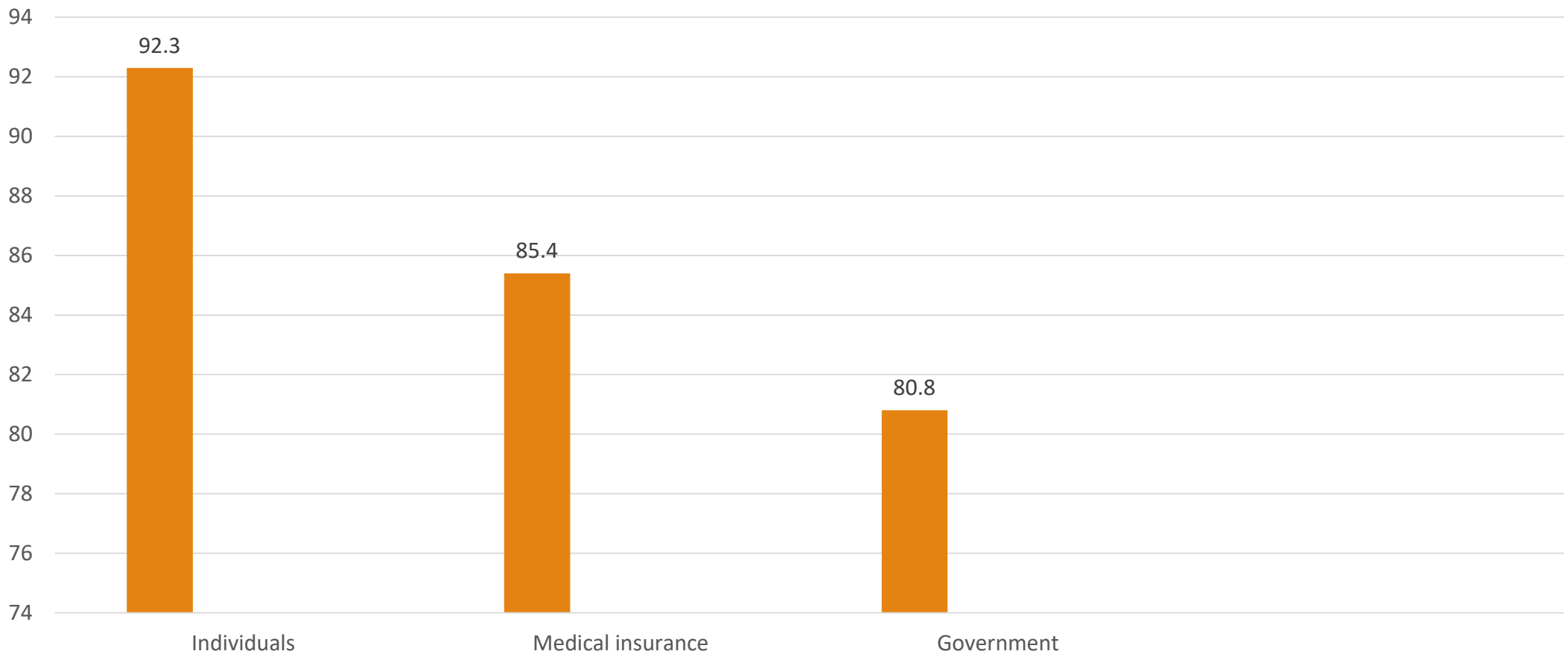
# Results: Maximum amount of WTP for Influenza vaccine (n=115)



# Results: Chi-square test (n=130)

- There were a significant association between perceived severity and both the influenza vaccine uptake and WTP
- Influenza vaccine uptake $X2$ (1, N=130) = 7.185, p=0.007
- WTP for IV $X2$ (1, N=130) = 4.177, p=0.041, respectively

# Results: Recommend financing sources for Influenza vaccination(n=130)



# Discussion

| Key findings | Discussion |
|---|---|
| Knowledge | Differ from study that showed 20,9 % (Vietnam) knowing vaccine price and 60,9 % (China) knowing priority group |
| Reasons for getting or not getting influenza vaccine | Similar with study in Vietnam that showed the common reasons for getting IV are protect self, protect family and patients, but differ in term of the most common reason for not getting IV is worrying about side effects of this vaccine |
| The maximum of WTP for Influenza vaccination | The median of the maximum amount of WTP for Influenza vaccination was US$ 8.5 (8.5-17) and US$ 12,5-18 in study in Vietnam and China, respectively |
| Recommended financial sources for IV | Similar from study showed that over 90% (China) think that government and medical insurance should participated in paying for Influenza vaccination |

# Conclusion

- The WTP for Influenza vaccination among healthcare professionals is relatively high ⇨ there is a room to expand immunization program
- Four-fifths of participants expected the government and medical insurance subsidies ⇨ financing support from these sources could improve the vaccine uptake.
- Other health interventions (influenza-related education and communication) are needed to expand vaccine coverage

# Limitation

- Recall-bias
- Further analysis need to be done
- Small sample size ⇨ Weak generalizability

Mahidol University
Wisdom of the Land

# References


Influenza (seasonal): World Health Orgnization; 2018 [Available from: https://www.who.int/news-room/fact-sheets/detail/influenza-(seasonal).

Iuliano AD, Roguski KM, Chang HH, Muscatello DJ, Palekar R, Tempia S, et al. Estimates of global seasonal influenza-associated respiratory mortality: a modelling study. (1474-547X (Electronic)).

Gupta V, Dawood FS, Muangchana C, Lan PT, Xeuatvongsa A, Sovann L, et al. Influenza Vaccination Guidelines and Vaccine Sales in Southeast Asia: 2008–2011. PLOS ONE. 2012;7(12):e52842.

Nguyen YT, Graitcer SB, Nguyen TH, Tran DN, Pham TD, Le MTQ, et al. National surveillance for influenza and influenza-like illness in Vietnam, 2006−2010. Vaccine. 2013;31(40):4368-74.

Nguyen TTM, Lafond KE, Nguyen TX, Tran PD, Nguyen HM, Ha VTC, et al. Acceptability of seasonal influenza vaccines among health care workers in Vietnam in 2017. Vaccine. 2020;38(8):2045-50.

Le XT, Nguyen HT, Le HT, Do TT, Nguyen TH, Vu LG, et al. Rural–urban differences in preferences for influenza vaccination among women of childbearing age: implications for local vaccination service implementation in Vietnam. Tropical Medicine & International Health. 2021;26(2):228-36.

# References


Lai X, Rong H, Ma X, Hou Z, Li S, Jing R, et al. Willingness to Pay for Seasonal Influenza Vaccination among Children, Chronic Disease Patients, and the Elderly in China: A National Cross-Sectional Survey. Vaccines. 2020;8(3)

Al-Tawfiq JA, Antony A, Abed MS. Attitudes towards influenza vaccination of multi-nationality health-care workers in Saudi Arabia. Vaccine. 2009;27(40):5538-41

Liu Z, Tan Y, Liang H, Gu Y, Wang X, Hao Y, et al. Factors Influencing Residents' Willingness to Contract With General Practitioners in Guangzhou, China, During the GP Policy Trial Phase: A Cross-Sectional Study Based on Andersen's Behavioral Model of Health Services Use. INQUIRY: The Journal of Health Care Organization, Provision, and Financing. 2019;56:0046958019845484.

Asgary A. Assessing households' willingness to pay for an immediate pandemic influenza vaccination programme. Scandinavian Journal of Public Health. 2012;40(5):412-7.

# Acknowledgements


- Dr Vijj Kasemsup *(Advisor)*
- Dr Samrit Srithamrongsawat *(Co-Advisor)*
- Dr Sariyamon Tiraphat *(Co-Advisor)*
- *Dr* Nalinee Nakittipha Chuakhamfoo (Mentor)
- AIHD, Mahidol University
- Faculty of Graduate Studies, Mahidol University

Thank you