

# Hen-dling the antibiotic conundrum

Understanding the diverse drivers of antibiotic use in Vietnamese small- and medium-scale chicken farming for successful interventions

## CONCLUSIONS

- Several demographic variables affect chicken farmers' antibiotic resistance related knowledge and practices, making intervention tailoring challenging
- Despite high knowledge about resistance, veterinary drug shop workers may have limited possibilities to contribute to more rational antibiotic practices due to lack of diagnostics and compliance, as well as conflicting economic interests



The continent of Asia with Vietnam marked in blue (left). Enlarged map of Vietnam (right) with Thai Nguyen province marked in yellow. Province of the capital of Hanoi marked in orange for reference.

## 1. BACKGROUND

A growing and intensifying poultry sector, in combination with large access to over-the-counter antibiotics, has led to alarmingly high levels of antibiotic resistance in Vietnamese poultry production.



## 2. STUDY AIMS

- Study (1): To identify demographic variables affecting Vietnamese chicken farmers' antibiotic resistance related knowledge and practices
- Study (2): To identify routines among veterinary drug shop workers that may affect antibiotic use at Vietnamese farms

## 3. MATERIALS & METHODS

- Questionnaire-based studies among 305 small-/medium-scale chicken farmers (1), and 50 veterinary drug shop workers (2), in Thai Nguyen province, Vietnam
- Descriptive statistics (1+2)
- Statistic analysis with item response theory (IRT) and mixed-effects linear regression (1)

## 4. RESULTS

Demographic variables affecting farmers' knowledge and practice scores (1):

- District
- Gender
- Age
- Education level
- Chicken keeping experience
- Farm size
- Purpose of chicken keeping
- Access to animal health services

Results from veterinary drug shops (2):

- Knowledge and education levels were generally high
- 86% stated farmers usually did not bring a prescription when wanting to buy antibiotics
- 86% stated farmers seldom/never had their sick animal(s) examined before the drug shop visit
- 54% recommended antibiotics for disease prevention
- Antibiotics was the most commonly sold drug category in most shops



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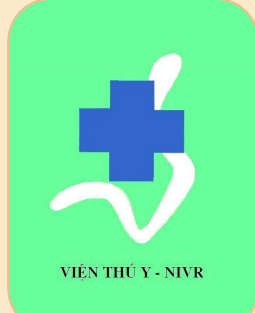
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Study 1

Study 2

(1) Nohrborg et al. 2024a. Understanding Vietnamese chicken farmers' knowledge and practices related to antimicrobial resistance using an item response theory approach  
(2) Nohrborg et al. 2024b. Understanding veterinary drug shop workers' knowledge and practices to identify drivers of antibiotic use in Vietnamese livestock farms

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