

# Mapping of resistance data for non-malarial febrile illness in South East Asia

## Introduction

High morbidity and mortality rates, especially in children, attributed to malaria has led to presumptive treatment of febrile patients with anti-malarials without confirmative diagnoses. The resulting misdiagnosis of malaria has led to overuse of anti-malarials, inappropriate treatment of serious illness, and contribution to global growth in AMR. Furthermore, clear diagnostic tools and therapeutic guidance for non-malarial illness in low-income settings is lacking.

## IDDO Resistance Mapping Project

The Infectious Diseases Data Observatory (IDDO) has undertaken a resistance mapping project in three locations (UK (Oxford), China, Brazil) on febrile illness in malaria endemic regions. A literature search is being conducted in order to map primary causes of fever in these regions in the aims of identifying priority areas for diagnostics research and improved surveillance and developing of regionally appropriate programs for fever case management.

## Methods

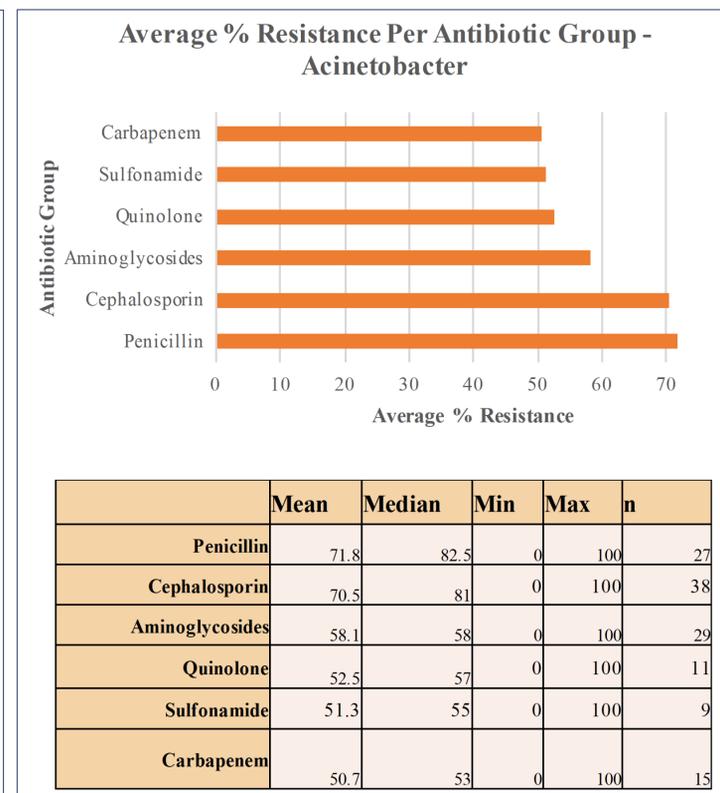
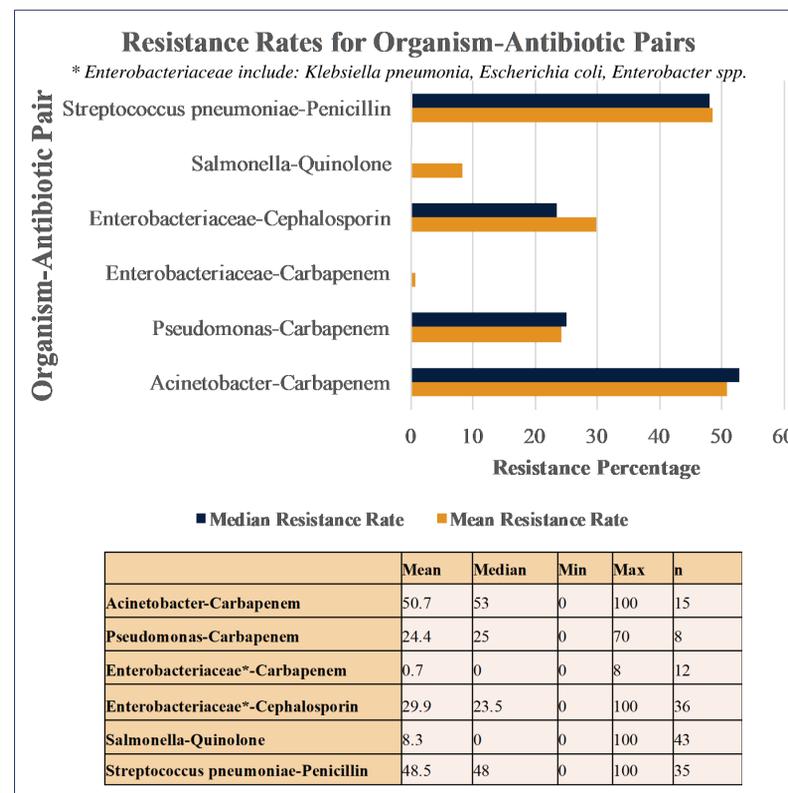
- Analysis of data using R
- Selection criteria for papers
  - Publication years: 1980-2015
  - Dealt with reports of fever in humans

Tiffany Pham, 2020, Department of Molecular Biology

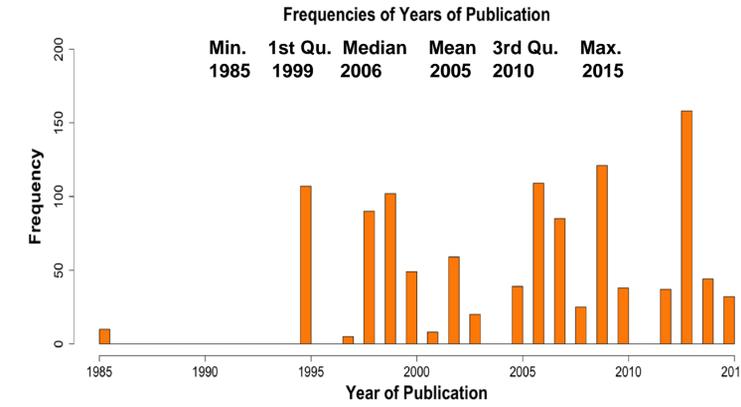
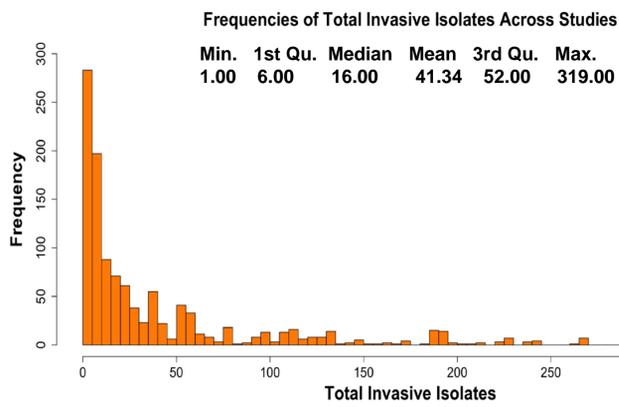
Oxford University Clinical Research Unit, Hanoi, Vietnam

Funded by Center for Health and Wellbeing under the Health Grand Challenges Program

## Results



## Limitations of Data



## Discussion

- Acinetobacter (WHO Priority Tier 1) shows alarming resistance to carbapenems, as well as Streptococcus pneumoniae (Tier 3) to penicillins
- Acinetobacter shows high average resistance percentages to several classes of antibiotics
- Limitations of Data
  - Small sample sizes (median of 16 isolates)
  - Data from late 90's and early 00's may be outdated, especially with recent advancements in WHO-driven AMR stewardship programs

## Further Research

Current Progress of Study as of March 2017

Region	Total records identified	Articles for full text review	Data extraction complete
Africa	16,872	1,300	1,014
China - English	960	137	137
China - Chinese	32,026	962	811
South America	21,650	1,186	136
South Asia	20,442	1,543	648
South East Asia	9,116	1,145	1,027
<b>TOTAL</b>	<b>101,066</b>	<b>6,273</b>	<b>3,773</b>

Future analysis may include comparisons of timelines of AMR growth in different regions, mapped alongside regional AMR policies to evaluate the effectiveness of these policies.

## Conclusion

- Several organism-antibiotic pairs on WHO's priority pathogen list display alarmingly high rates of resistance, especially Acinetobacter
- Limitations of current data (e.g. small sample sizes, reliance on older data, inconsistent data collection methods) may lead to different conclusions as IDDO project continues

## Acknowledgements

I thank my wonderful supervisors, Dr. Vu Thi Lan Huong and Dr. Sonia Odette Lewycka for advising me on this project. I truly appreciate OUCRU for hospitality and guidance this summer, as well as CHW and HGC for their financial support.

# Practitioner poster

## Title Goes Here: catchy and concise

**Your name, class year, and department**

The place where you worked this summer

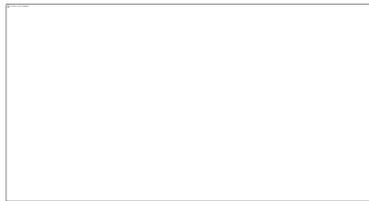
Funded by CHW under the XXX program (IIP, PICS, U.S. Health Policy Scholars, Health Grand Challenges, Princeton Global Health Fellows)

### Introduction

- Describe the overall situation, using bullet points
- Keep text to a minimum size of 24
- This should frame your research so readers can understand why it is important for global health

### Objective of Internship

A one sentence overview of your learning objectives in taking this internship



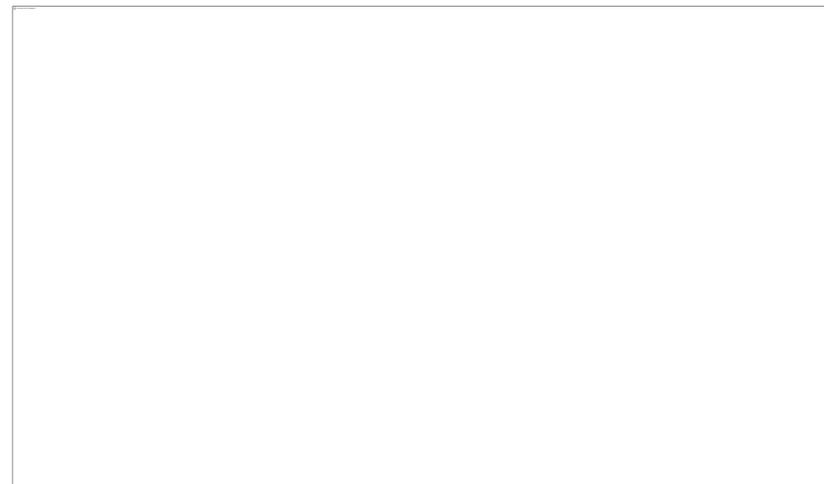
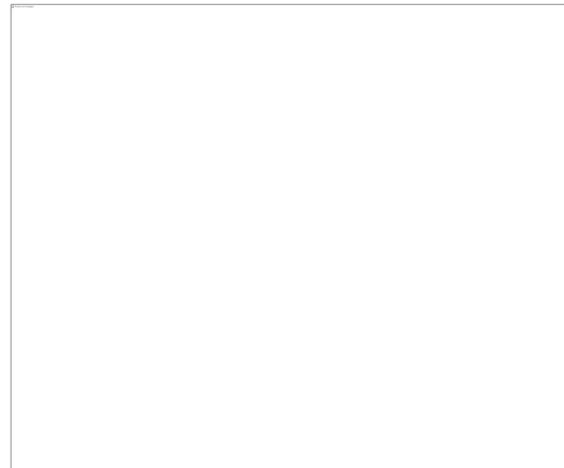
*Include photos and captions, always citing the photographer and if possible those in the picture.*

### Work profile

- Explain the overall organizational objectives
- Explain the role of your research project in that
- Use a new bullet point for each new concept
- Describe your role in the research project

### Reflection

- Explain how you contributed this summer
- Highlight what you learned during the internship
- Use the space wisely. Split, or trim down the results section if there is more information contained in other sections



- Pictures that feature you at work during the summer internship are a good choice
- Use short text boxes
- Highlight key aspects in **bold**
- Provide a logical flow for your results

- Place text, figures and photos carefully.
- Get input from others on the how clearly understood the poster is
- Be ready to explain the poster in an informal setting
- Think about the key points you would raise to someone asking about your summer experience
- Think about some likely questions that people will ask you

### Looking ahead

- Explain how your summer experience has impacted your future plans

### Questions

- Are there questions that remain unanswered following your internship?

### Conclusion

- Draw conclusions based upon the internship experience

### Acknowledgements

Acknowledge the organization where you work as well as supervisors. Acknowledge CHW and whoever else may have sponsored the research. Acknowledge the program (IIP, PICS, etc) through which you did the research.