Antibiotic use in Southeast Asia: Research experiences of a "social scientist"

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Interdisciplinary Research & Antimicrobial Resistance Workshop
2 March 2017

Part I:

Overview and Challenges in Research Activities

Part II:

Doing Interdisciplinary Research in AMR

Addressing Challenges, Realising Benefits

OUTLINE

Files stacked at NGO clinic in Yangon, Myanmar
Photo credit: Marco J Haenssgen

PART I: OVERVIEW

Rolling hills in Chiang Rai, Thailand
Photo credit: Nutcha Charoenboon

Overview

Personal Background

Treatment-seeking behaviour
- Local sense-making
- Multiple solutions
- Complex trajectories

Street-level bureaucracy
- Interpretation of policies
- Pressure from above and below
- Room for manoeuvre

Activity Space

Patients

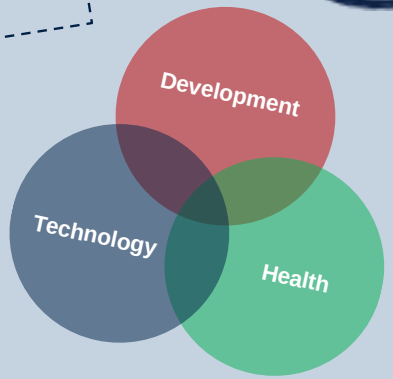
Existing Tools & Solutions

CRP Testing

Healthcare Workers

Actor-network theory
- Test as active agent
- Situated in system of solutions
- Influencing patient-HCW relationship

OXFORD DEPARTMENT OF INTERNATIONAL DEVELOPMENT



- **Economics**
- **Anthropology**
- **Sociology**
- **Political science**
- **Public health**

IEEE SSIT SOCIETY ON SOCIAL IMPLICATIONS OF TECHNOLOGY

2015 IEEE International Symposium on Technology in Society (ISTAS) Proceedings
ISBN: 978-1-4799-8283-7

Exploring the Mismatch Between Mobile Phone Adoption and Use Through Survey Data from Rural India and China

Haenssgen *Emerg Themes Epidemiol* (2015) 12:20
DOI 10.1186/s12982-015-0041-8

Emerging Themes in Epidemiology

METHODOLOGY Open Access

Satellite-aided survey sampling and implementation in low- and middle-income contexts: a low-cost/low-tech alternative

ELSEVIER

Contents lists available at ScienceDirect

SSM - Population Health

journal homepage: www.elsevier.com/locate/ssmph

Article

Healthcare access: A sequence-sensitive approach

ELSEVIER
www.elsevier.com/locate/worlddev

World Development Vol. xx, pp. xxx–xxx, 2017
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http://dx.doi.org/10.1016/j.worlddev.2017.01.014

The Social Implications of Technology Diffusion: Uncovering the Unintended Consequences of People's Health-Related Mobile Phone Use in Rural India and China

Health Policy and Planning, 2017, 1–9
doi: 10.1093/heapol/czx022
Methodological musings

OXFORD

Impact of high-intensity polio eradication activities on children's routine immunization status in Northern India

Overview

Recent Research Activities

Mobile Phones and Healthcare Access (India & China)

- Rural health behaviour study and technology diffusion
- Interviews/FGDs with 231 respondents, survey of 800 adult villagers
- Challenging the logic of “mHealth”

- Interdisciplinary team:
  - Development studies
  - Public health
  - Economics / industrialisation
  - Sociology / network science
  - Biomedical engineering

- Challenges: **Language, interdisciplinary involvement, target group expectations**

Survey team in China
Photo credit: Marco J Haenssgen

Overview

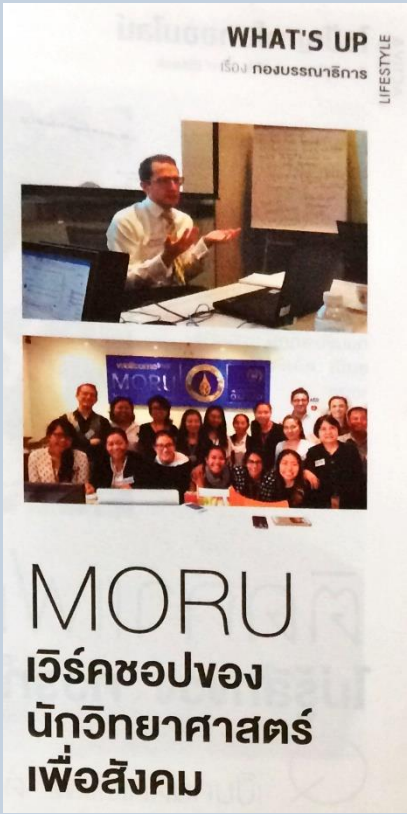
Recent Research Activities

Social Research, Engagement, & Evaluation Capacity (Southeast Asia)

- Knowledge exchange workshop
- 25 participants from Thailand, Laos, Cambodia, Vietnam, UK
- Identify barriers for socio-medical research

- Interdisciplinary audience:
  - Development studies
  - Economics / agriculture, health economics
  - Clinical research / microbiology, epidemiology
  - Bioethics
  - Medical practitioners
  - Public engagement
  - Media, performing arts

- Challenges: **Social research concepts**



Workshop news item in Thailand's *Cheewajit* health magazine

Overview

Current Research Activities

Evaluating AMR-Themed Public Engagement (Thailand)

- Extensive public engagement activities at MORU, Bangkok
- Funders increasingly expecting evaluation
- Mixed-method realist evaluation approach of puppet theatre
- Methodological objective

- Interdisciplinary team
  - Led by bioethicist and evaluator
  - Supported by
    - 2 interns (paediatrics, film)
    - 1 local consultant (social research)
    - 2 local assistants (social research)

- Challenges: **Ethics, methodology**

Rehearsal of *Fishy Clouds* puppet play at Muslim community in Bangkok
Photo credit: Marco J Haenssgen

Overview

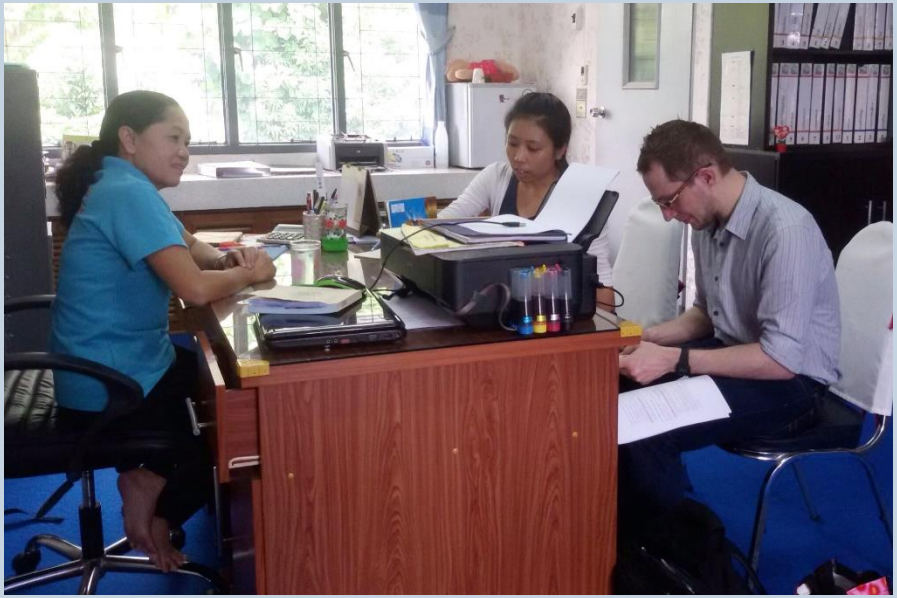
Current Research Activities

The Social Context of CRP Testing (Thailand, Myanmar, Vietnam)

- Part of clinical trials in Southeast Asia to introduce biomarkers in primary care
- Invited to study “attitudes and behaviours” of patients and healthcare workers
- 85 hours recorded material from 117 patients and healthcare workers

- Social study in interdisciplinary setting
  - initiated by health economist
  - to support clinical research
  - working with medical doctors
  - interviewing patients & practitioners
- Publications aimed at clinical and socio-medical research journals

- Challenges: **Research design, approach, problem definition**



Healthcare worker interview in Chiang Rai
Photo credit: P’An

Overview

Current Research Activities

Behaviour, Marginalisation, & Knowledge Diffusion in AMR (Thailand, Laos)

- Rural surveys to understand antibiotic use and idea diffusion
- Expanding existing work into general popular behaviour
- Funded by cross-council initiative to Tackle Antimicrobial Resistance

- Interdisciplinary team (previous links)
  - Development studies
  - Public health & training
  - Medical anthropology
  - Sociology / network science
  - Economics / agriculture, health
  - Clinical research, microbiology
  - Engagement and bioethics

- Challenges: **Expectations, processes**

The Thai-Lao border
Photo credit: Marco J Haenssgen

Overview

Planned Research Activities

Supply-Induced Demand for Antibiotics Among Marginalised Populations in Northern Thailand

- Small qualitative study to understand informal antibiotic access
- Exploring empirically grounded hypotheses
- Learning opportunities for junior team members and students
- Working in context of biomarker trial

Advancing AMR Social Theory, Empirical Knowledge, & Research Capacity (Thailand, Myanmar, Laos, Cambodia)

- Expansion of existing research agenda in Southeast Asia
- Social, economic, technological, & policy context of AB use
- Cultivating framework to analyse behaviour in health system
- Develop social research portfolio and capacity in the region

Entrance to NGO clinic in Yangon, Myanmar
Photo credit: Marco J Haenssgen

PART II: DOING INTER-DISCIPLINARY RESEARCH

The White Temple in Chiang Rai, Thailand
Photo credit: Marco J Haenssgen

Doing Interdisciplinary Research

Revisiting the Challenges

The projects highlighted challenges in interdisciplinary work.

Problem Area	Examples
Problem area & population	**"Patients"** vs. **general population**, "disease" vs. care seeking
Speaking same language	**Jargon** like "capabilities" is misunderstood
Social research concepts and approaches	Using frameworks to guide research become **too abstract** / uninteresting for collaborators; one group of **"social scientists"**
Involving all participating disciplines	Participants feel easily **side-lined** and **frustrated** if their suggestions are not applicable to a social research study
Research designs	**Squeeze** a social study into an existing clinical trial
Research methods	**Qualitative research** to be **"representative"** and closed-ended
Implementing research	Sampling in **clinical settings**, working through hospital partners
Ethical approval	Medical ethics councils with **limited experience** in social science
Target group understanding	Unable to **convey main point** of mHealth studies to reviewers

Doing Interdisciplinary Research

Underlying Problems of Interdisciplinary Collaboration

The issues are symptomatic of deeper problems.

Research paradigms and objectives

- Constructivist vs. positivist vs. pragmatic vs. transformative research
- Exploratory vs. action research – understanding vs. improving

Dealing with ambiguity

- Large parts of the social sciences embrace and explore ambiguous meaning
- Ambiguity and “subjectivity” is largely avoided in medical research

Taking models too serious

- Social researchers can get absorbed in language and logic of their models

Established “ways of doing stuff”

- Social and medical researchers follow different routines and work processes (e.g. protocols, GCP certification)

Unspoken stances, assumptions, and biases

- Firmly held assumptions have evolved during many years of training and practice – surfacing only when challenged in interdisciplinary research

Doing Interdisciplinary Research

Some Suggestions

Problems in inter-disciplinary work are common but can be dealt with.

Addressing the Symptoms

- **Enthusiasm**, **patience**, **perseverance**
- Involve the various disciplines at the **proposal stage** of the project
- Focus on **relevance to practice** when discussing with medical researchers
- Work with inter-disciplinary **mediator**
- Translate jargon into **lay terms**
- Be self-critical and explicit about conflicting **research paradigms**
- Specify **desired inputs** from each **collaborator** during project cycle
- Present research ideas **outside of your home discipline**

Addressing Deeper Issues

- Offer inter-disciplinary **research training** in global health and medical anthropology
- Provide research **internships** for medics in social research projects
- Raise **interest for local social researchers** in low- and middle-income universities to explore medical topics empirically
- Develop inter-disciplinary long-term collaborations (e.g. resident social scientists in medical research units) to **design research (processes) jointly**

→ **Build socio-medical research capacity**

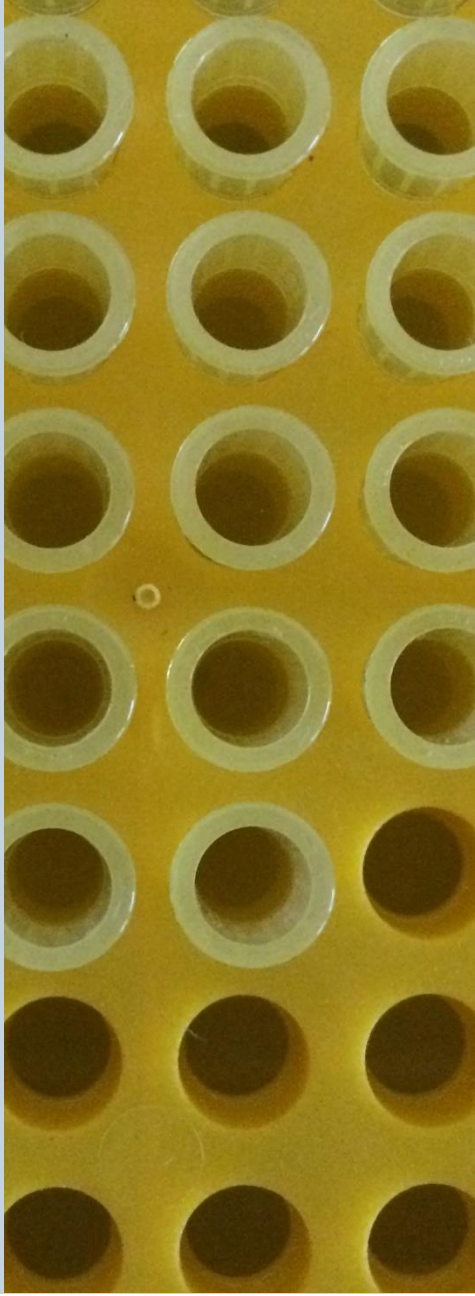
Doing Interdisciplinary Research

If it all goes well…

Inter-disciplinary research is challenging but rewarding.

Unprecedented opportunities

- Socio-medical research as a **fertile, demanded niche**
- Opportunity for social researchers to work in **global health priority area**
- Scope for **economics**, **political sciences**, **social anthropology**, **sociology** to inform global health challenges
  - Economic, social, political **context** of AMR
  - **Behaviours** of patients' and healthcare workers'
  - Implementation **challenges** of clinical trials and policies
  - **"Big picture"** understanding of macro context



Set of samples
Photo credit: Marco J Haenssgen

Doing Interdisciplinary Research

If it all goes well…

Inter-disciplinary research is challenging but rewarding.

Constructive collaboration

- Tackle research problems more **holistically**
- Social research has **informed medical research practice**:
  - Assumptions and implementation context of **mHealth**
  - Public health research methods for **health behaviour**
  - Methods to evaluate **AMR public engagement**
  - Case example of CRP **biomarker testing**:
    - AB demand for sore throat → **understanding impact**
    - No precise concept of “AB” → **small scope for awareness**
    - Intervention interacts with policy context → **transferability**

Detail of CRP testing and AMR awareness poster for patients in Yangon. Myanmar
Photo credit: Marco J Haenssgen

Doing Interdisciplinary Research

If it all goes well…

Inter-disciplinary research is challenging but rewarding.

New research impulses

- Expanding your **"comfort zone"**
- Inspiring **locally grounded** research ideas
  - Entrenched behaviours in **community networks**
  - Market behaviour of **informal vendors**
  - Patient **decision-making routines** in pluralistic health system
  - Economic **substitutes to antibiotic use**
  - Popular **resistance** to policies
- Developing **social theory** in global health context

Houy Kaew waterfall in Chiang Rai, Thailand
Photo credit: Marco J Haenssgen

SUMMARY

Shrine in Khao Yai, Thailand
Photo credit: Marco J Haenssgen

Conclusion

Inter-disciplinary AMR research is challenging but rewarding

Disciplinary divides can be overcome in enthusiastic teams

Structural barriers require longer-term and institutional solutions

THANK YOU.

QUESTIONS?

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Sunset in Bangkok, Thailand
Photo credit: Nutcha Charoenboon