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
PART I: OVERVIEW
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

Existing Tools & Solutions
CRP Testing

Healthcare Workers

Activity Space

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

Health
Technology
Development

Economics
Anthropology
Sociology
Political science
Public health

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

Emerging Themes in Epidemiology

SSM - Population Health

Article
Healthcare access: A sequence-sensitive approach

World Development Vol. xx, pp. xxx-xxx, 2017

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

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

AMR Interdisciplinary Research Experiences

2 Mar 2017

2 Mar 2017
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
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**
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
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
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*
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
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.

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