Session 2. What is health system research?

Health Systems Research Course

Western China School of Public Health

7-11 December 2015

Outline

- Definition(s)
- Scope and nature
  - describing and evaluating – health systems and health policy lenses
  - macro, meso, micro levels
  - a systems orientation
- Methodological considerations

H(P)SR 'seeks *to understand and improve how societies organize themselves in achieving collective health goals*, and how different actors interact in the policy and implementation processes to contribute to policy outcomes.

By nature, it is interdisciplinary, a blend of economics, sociology, anthropology, political science, public health and epidemiology that together draw *a comprehensive picture of how health systems respond and adapt to health policies, and how health policies can shape – and be shaped by – health systems and the broader determinants of health*'.

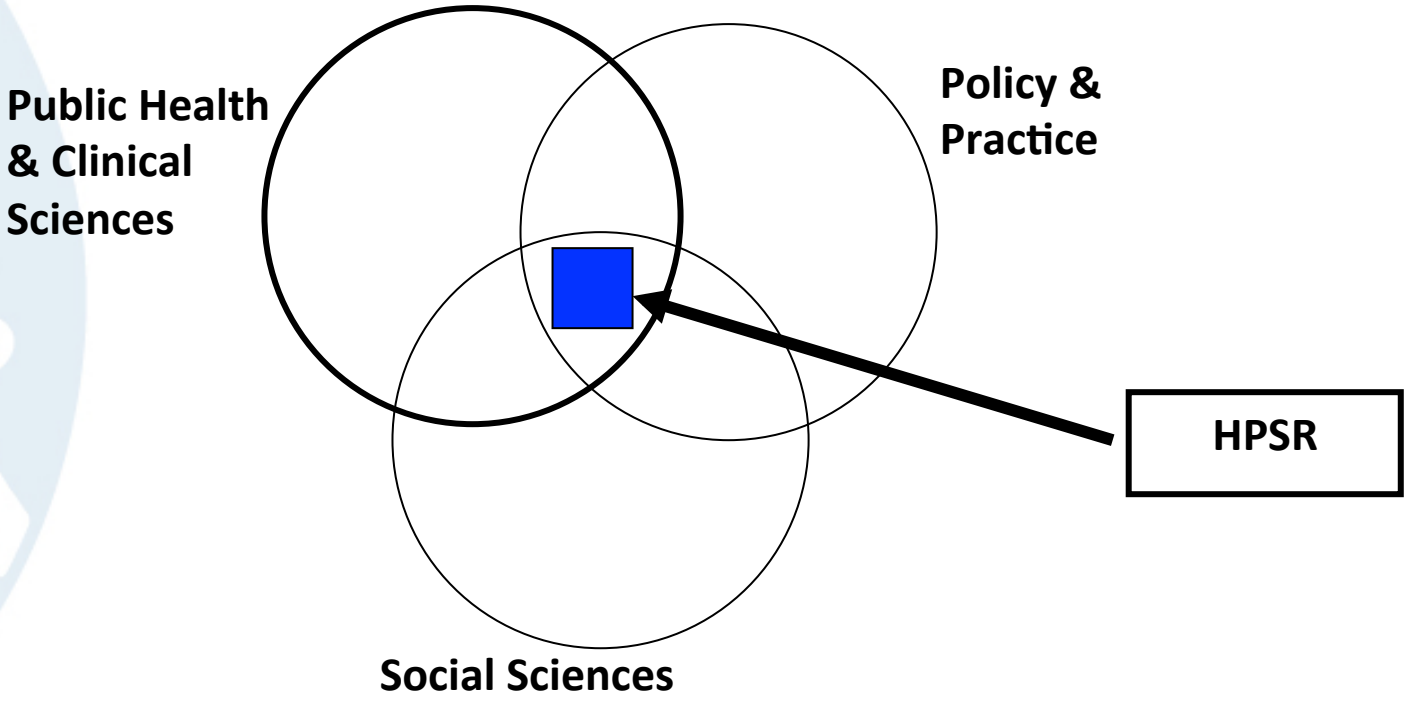
Gilson (ed.), 2012

- Distinguished by issues and questions considered, *not* by a disciplinary base, and includes:
  - research focused on health services as well as promotion of health
  - concern for global and international issues as well as national and sub-national issues
  - research on or of policy – addresses politics of health systems and health systems services
- Promotes work that explicitly seeks to influence policy

Why and what policy focus?

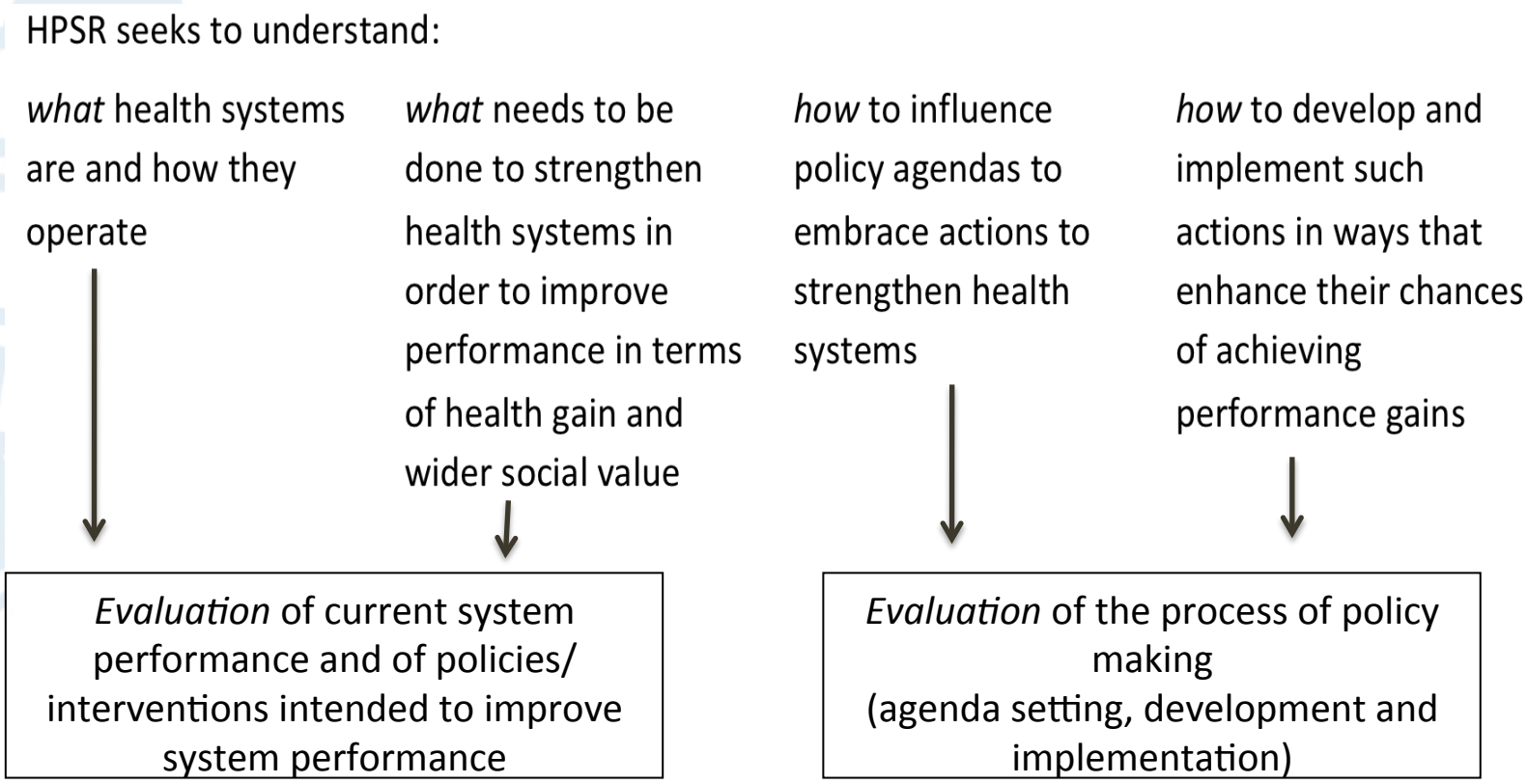
- An applied research field that by definition engages with policy:
  - analysis *of* policy
  - analysis *for* policy
- And focuses on both
  - policy content/interventions
  - processes of policy decision-making

HSR lies at the intersection of a number of fields



HSR addresses both:

- Research on describing a system (how it works)
- Research on changing a system (how it changes/how to change it)



Defining features?

Research questions rooted in policy and systems issues

- *Health policy* and how to *implement* it effectively
- *System performance* and how to *improve* it
  - Focus on *system as a whole*
    - » consider one building block and its *interactions* with others
    - » consider factors influencing system

Scope & nature of HPSR (continued)

HPSR is *not*:

- Clinical or basic science
- Only rooted in health economics or focused on financing issues (though both important)
- Focused on disease distribution, causes and interventions (but rather *generic* organisational and societal 'structures' through which interventions are implemented)

Scope & nature (continued)

HSR might look at specific services/disease programmes when:

- They are used as a *tracer* for understanding systems issues e.g. maternal health services; the impact of district strengthening on child health outcomes
- They have *system wide effects* e.g. antiretroviral therapy

✓ But for HSR it is important to think BEYOND the programme/service!

Thinking about systems not programmes

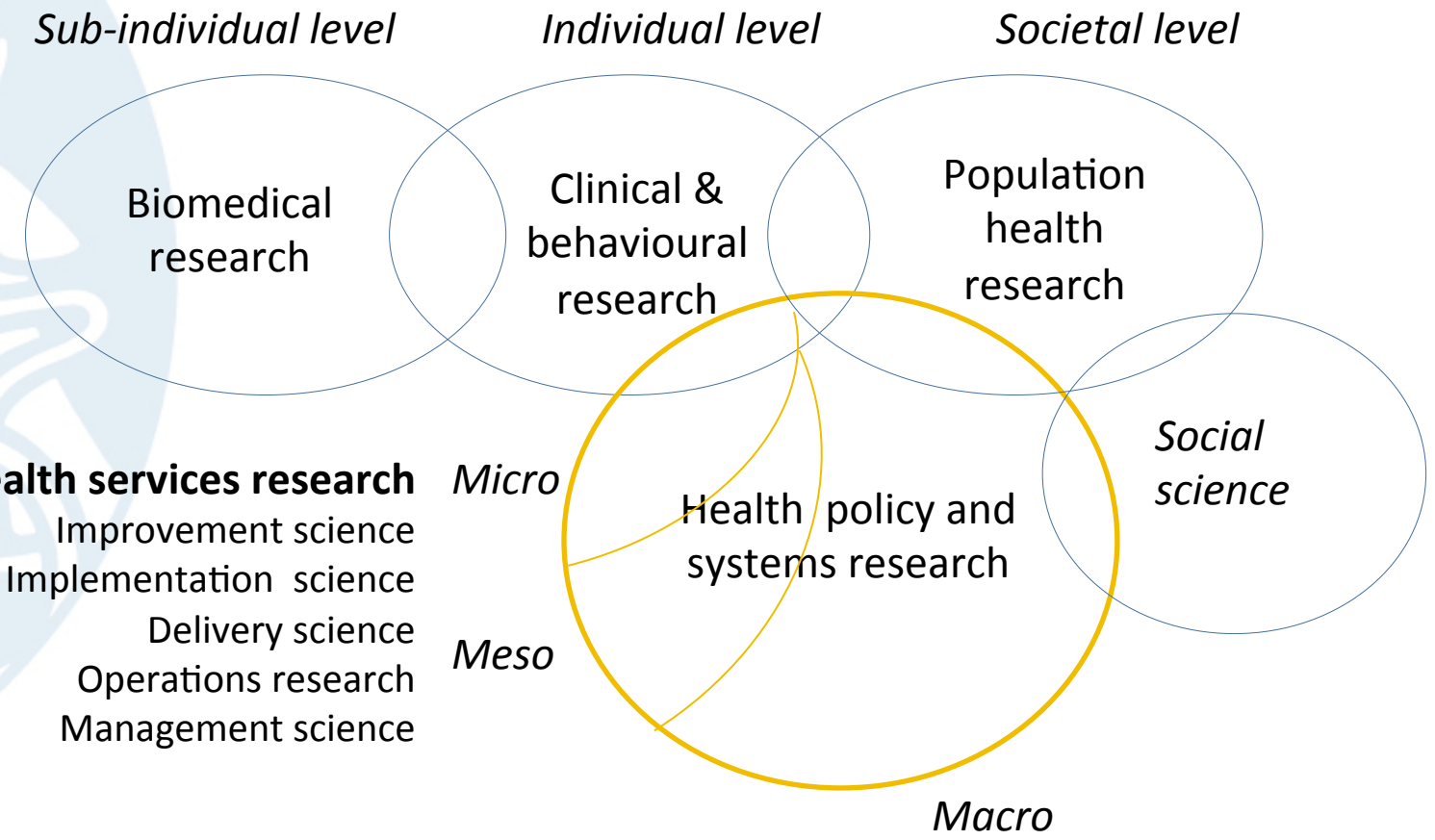
Programmatic and health systems perspectives on tuberculosis (TB) research		
HSR goal	**Disease programme perspective**	**Health systems perspective**
Thinking broad (beyond the disease)	Izoniazid (INH) prophylaxis for prevention	Secondary prevention for TB and other common diseases
Thinking cross-cutting (underlying functions)	Implementing a TB patient register	Improvement in information systems
Thinking scale (e.g. facility to district, province)	Strengthening facility Directly Observed Treatment, Short Course (DOTS) support systems	Strengthening district community-based services
Thinking comprehensive delivery platforms	Running a TB service	Building a primary health care system that is available, affordable and acceptable/responsive

Thinking about levels

- Macro level
  - architecture and oversight
- Meso level
  - functioning of organisations such as health facilities (interventions or programmes as tracers for that)
- Micro level
  - the individual in the system
- Cross-level
  - for example: how global influences shape architecture, so influencing local systems and individuals' behaviour

HPSR focus

Adapted from Hoffman et al. 2012



MACRO level

Good health at low cost: 25 years on

Balabanova et al., 2011

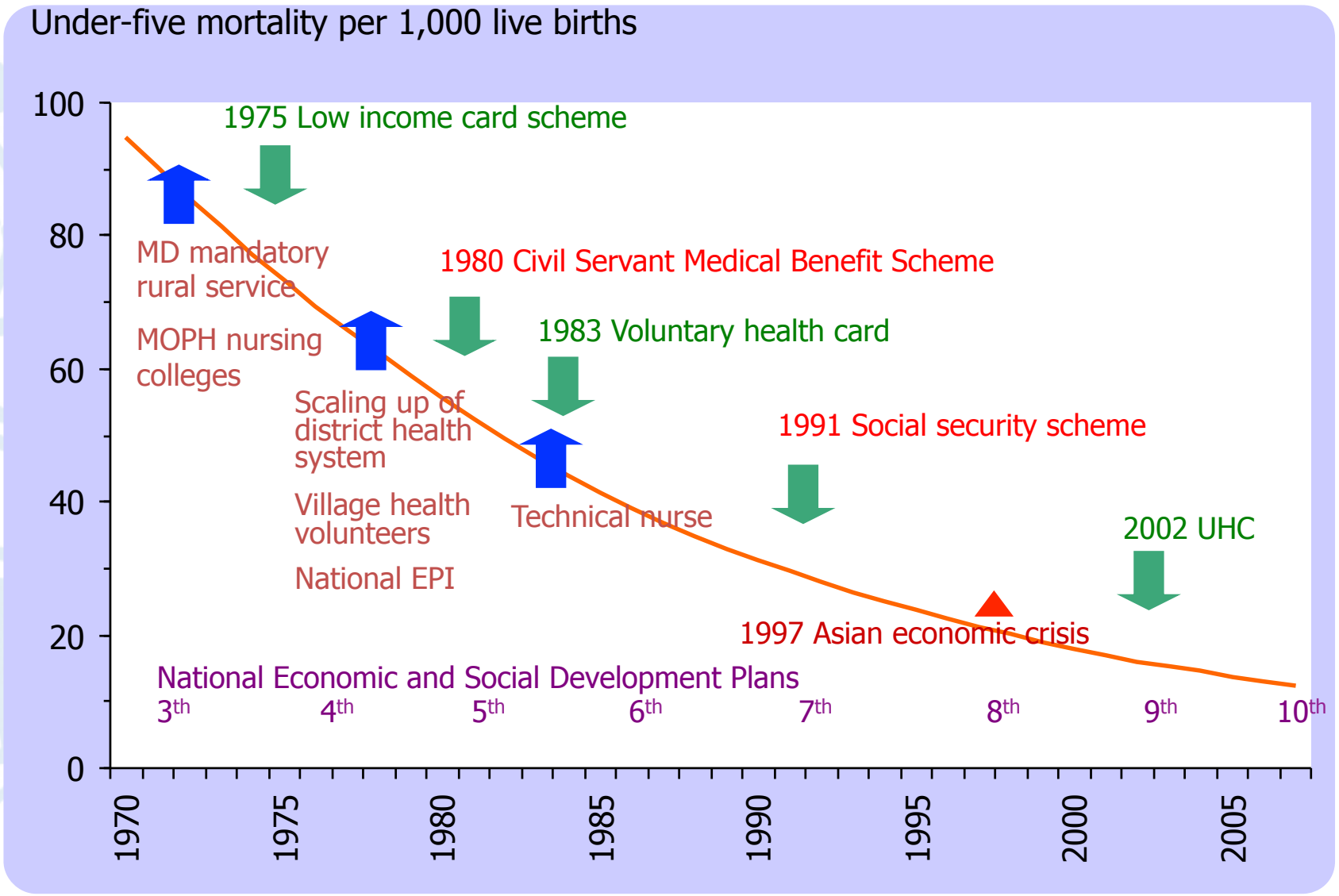
Case studies of +ve 'deviants': Thailand, Bangladesh, Ethiopia, Kyrgyzstan, Tamil Nadu

Methods

- Link outcomes with health system development processes over long periods of time
- Multi-method
- Trends in human resources, financing
- Analysis of policy actors and processes

THAILAND HEALTH SYSTEM DEVELOPMENT , 1970s-2010s

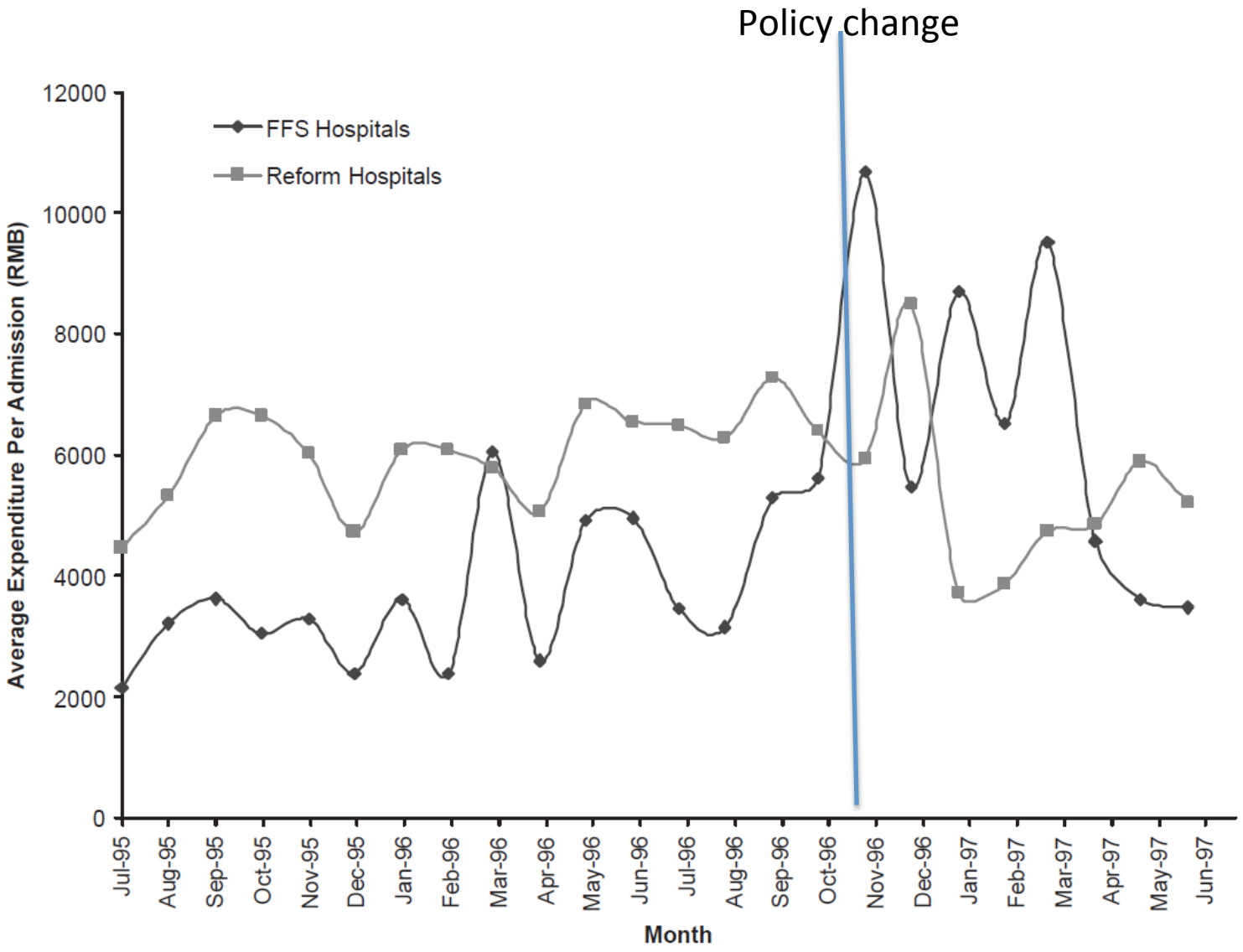
LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE



Source: U5MR was analysed from IHME data; from Srithamrongsawat 2013

Hospital response to provider payment reform (Meso level)

- Provider payment reform in hospitals in Haikou City, Hainan Province
- Change from FFS to prepayment in 6 hospitals, while a comparison group retained FFS
- Incentive for efficiency under prospective payment somewhat mitigated by limitation on surplus retention - > empirical question about which incentive would dominate
- Evaluation examined impact on individual-level hospital expenditure for different categories of service, linked to services with high profitability (expensive prescription drugs, high-technology tests) vs. standard inpatient bed charges (less potential for profit)
- Use inpatient claims data from 6 intervention hospitals and 8 comparison hospitals, before and after the reform.


Policy change
FFS Hospitals
Reform Hospitals
Average Expenditure Per Admission (RMB)
12000
10000
8000
6000
4000
2000
0
Jul-95
Aug-95
Sep-95
Oct-95
Nov-95
Dec-95
Jan-96
Feb-96
Mar-96
Apr-96
May-96
Jun-96
Jul-96
Aug-96
Sep-96
Oct-96
Nov-96
Dec-96
Jan-97
Feb-97
Mar-97
Apr-97
May-97
Jun-97
Month

MICRO level

Effect of health insurance on utilization of health care by the elderly (Xin Li and Wei Zhang, 2013)

Authors use the pilot survey of the China Health and Retirement Longitudinal Study (CHARLS) to explore the effect of different health insurance schemes (UEBMI, URBMI, NCMS) on health care utilization

- Compared with people without health insurance, people with UEBMI and URBMI are more likely to use outpatient services
- People with UEBMI have less OOP payments in Zhejiang while in Gansu province, people with NCMS are less likely to have outpatient visits, and people with UEBMI are more likely to be hospitalized.
- Among those who have at least one outpatient visit, different insurance types do not affect the number of outpatient visits in both provinces.
- Although the health insurance programs have some positive impacts on the health care utilization, these impacts are still limited

Xin Li and Wei Zhang (2013) The impacts of health insurance on health care utilization among the older people in China. *Social Science & Medicine*, 85: 59-65

HPSR methodological considerations

Applied

- Starts with topic or problem rather than method (vs *epidemiology*) or *discipline*
- 'Real world' vs laboratory
- Policy relevant

No single methodological gold standard study design

- Range of study designs or research strategies depending on purpose and question

Methodology (continued)

Must consider complexity

- Investigator has little control over events
- Numerous interacting elements, open systems (complex adaptive systems)
- Different actors with different experiences and different questions: managers, citizens, patients
- Social phenomena important: culture, interests, leadership, etc.
- Contextual influences

Rwashana, Williams & Neema, 2009

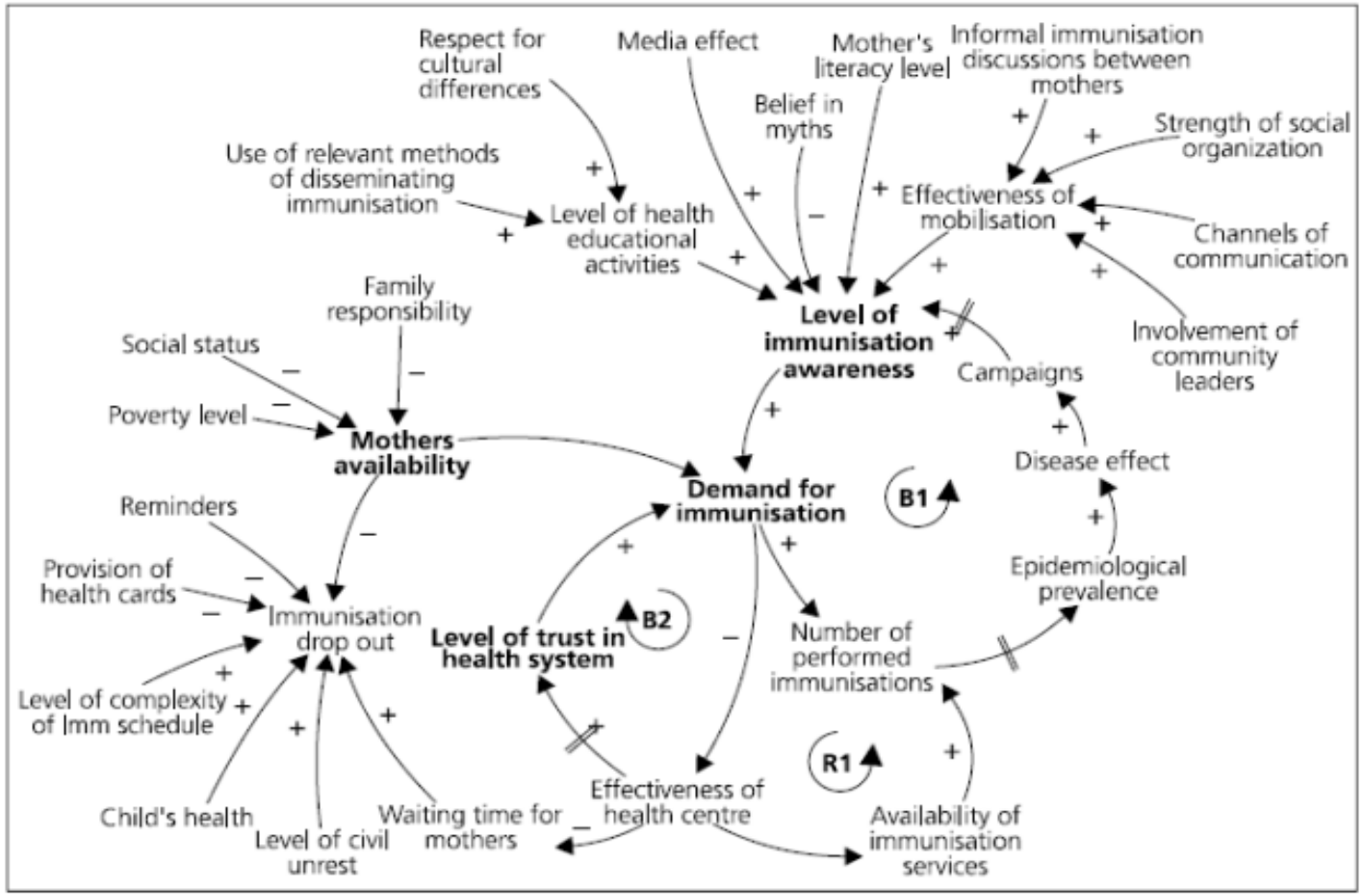


Figure 4 Causal loop diagram for demand for immunization dynamics

Methodology (continued)

No single methodological gold standard e.g. RCT

- Range of study designs or research strategies depending on purpose and question
  - cross-sectional (Module 5)
  - longitudinal (Module 5)
  - experimental (Module 6)
  - case study (Module 8)
  - ethnographic (not covered)
  - action research (Module 9)

Being systematic, principled, ethical

The four steps of HPSR

Step 1: **Identify the research focus and questions**

Step 2: **Design the study**

Step 3: **Ensure research quality and rigour**

Step 4: **Apply ethical principles**

Acknowledgement

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