

Welcome to the LSTM Leverhulme Lecture

Presented by: Dr Tim Evans, World Bank

**“Delivery research in global health: a
pregnant moment?”**



Delivery Science and Global Health: a pregnant moment?

Tim Evans

Director, Health, Nutrition and Population, The World Bank Group

Leverhulme Lecture, Liverpool, June 12, 2014



Outline

- Knowledge and know-how for delivery matter
- Targets for Improvement in delivery
- Riding a “third wave” of evidence for UHC?
- Investing in “the science” and “practice of the science” of delivery

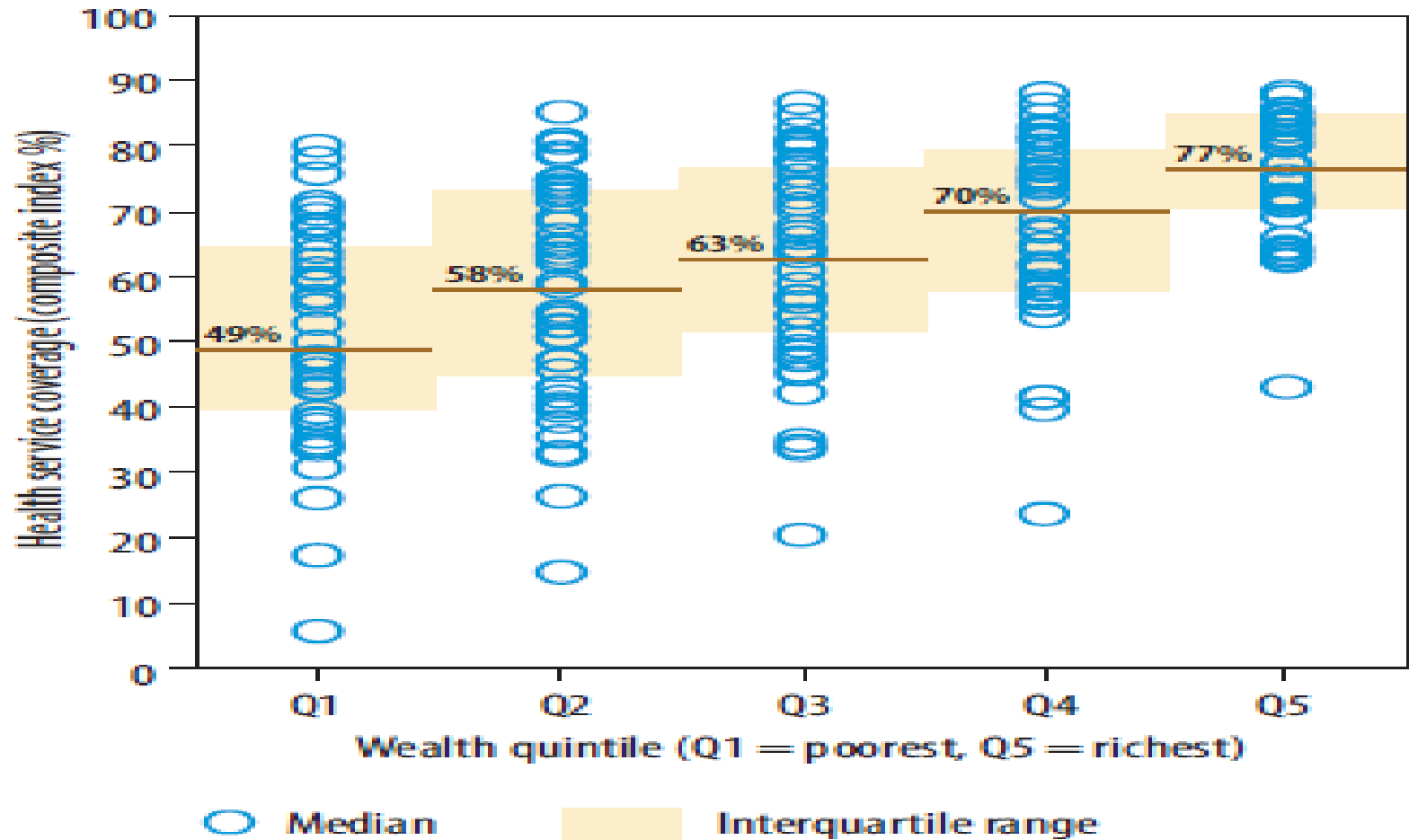


1

Knowledge and Know-how for Health Delivery Matters



Pervasive Inequities in Maternal and Child Health Services Coverage

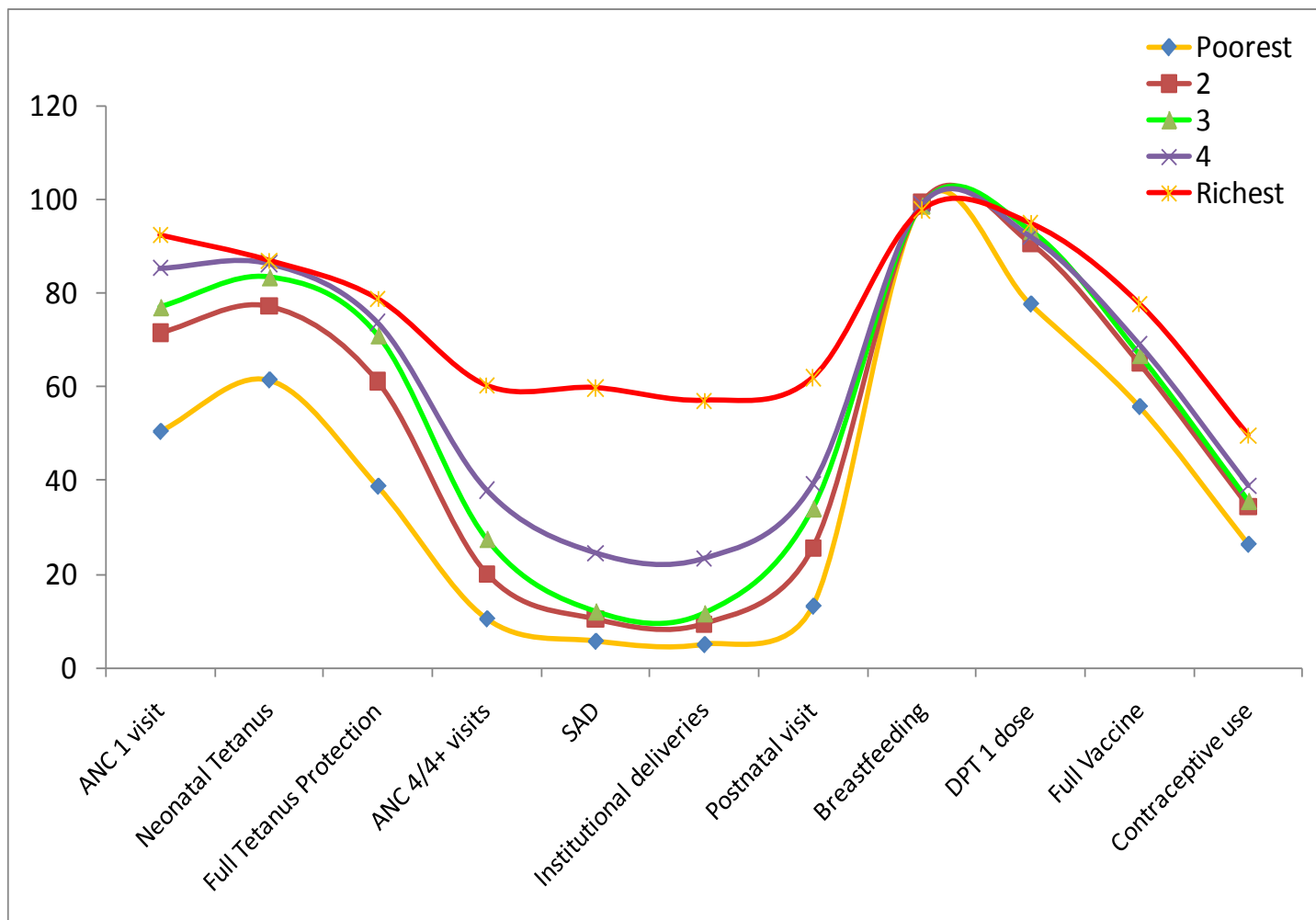


Source: World Health Report 2013



Equity and survey data

Dipping-in-and-out of the health system: Nepal 2006





Why are poorer populations...

- 2x more likely to have TB?
- 3x less likely to access TB care?
- 4x less likely to complete TB treatment?
- 5x more likely to suffer impoverishment due to the costs of TB care?





The Inverse Care Law

“THE AVAILABILITY OF GOOD MEDICAL CARE TENDS TO VARY INVERSELY WITH THE NEED FOR IT IN THE POPULATION SERVED.”

Julian Tudor Hart, The Lancet, 1971

Common challenges to scale up services for HIV, TB, malaria, and immunization

HIV/UA assessment report

- HR crisis
- Inadequate financing
- Affordable commodities
- Stigma, discrimination...
- Monitoring and Eval
- Accountability

Global Plan to stop TB

- HR crisis
- Inadequate financing
- Quality drugs
- Laboratory capacity
- Partnership alignment

World Malaria report

- HR crisis + Community
- Inadequate financing
- Drug efficacy
- Information system
- Monitoring and Eval.

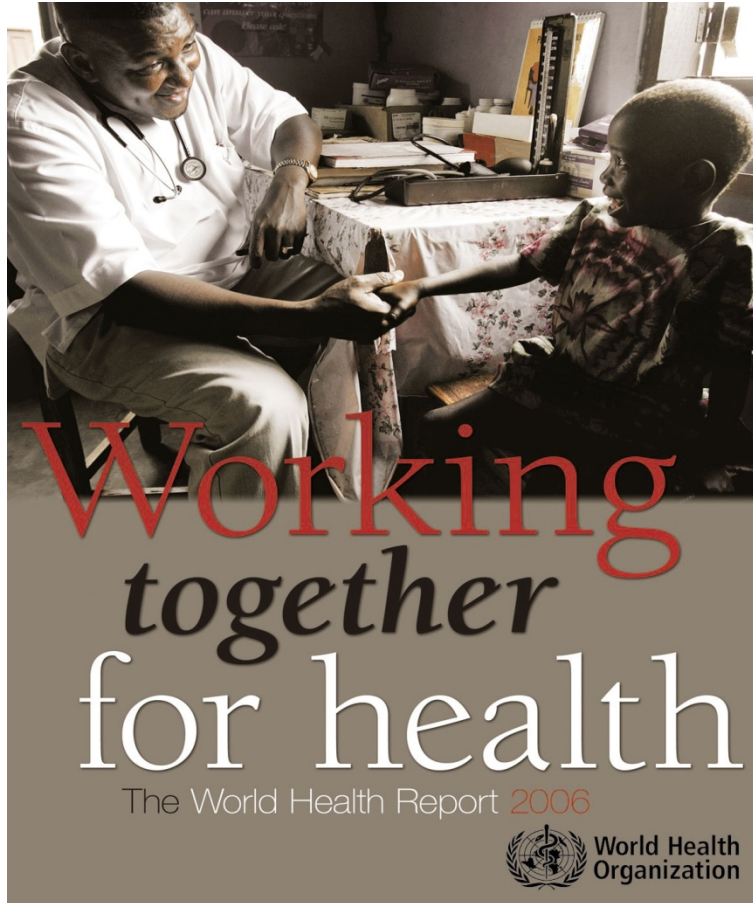
GAVI/Norad report

- HR crisis
- Inadequate financing
- Leadership and management
- Inter-agency coordination





World Health Report 2006

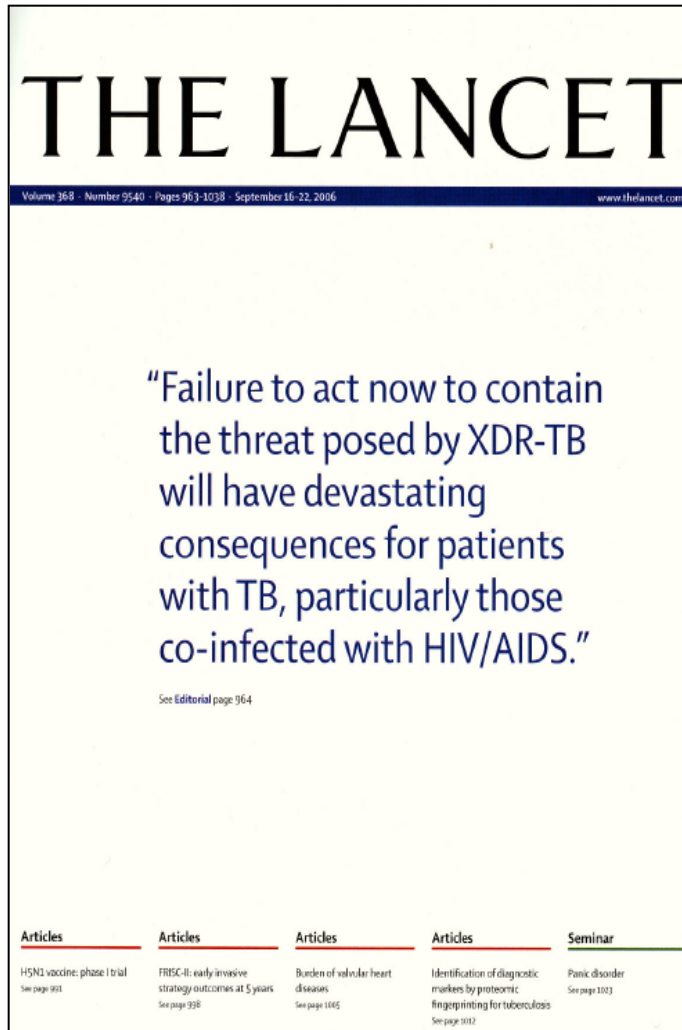


**Critical shortage
of health
workers in 57
countries;**

**4.3 million more
health workers
needed to
provide
essential
interventions.**



“Poor TB services” and emergence of XDR-TB

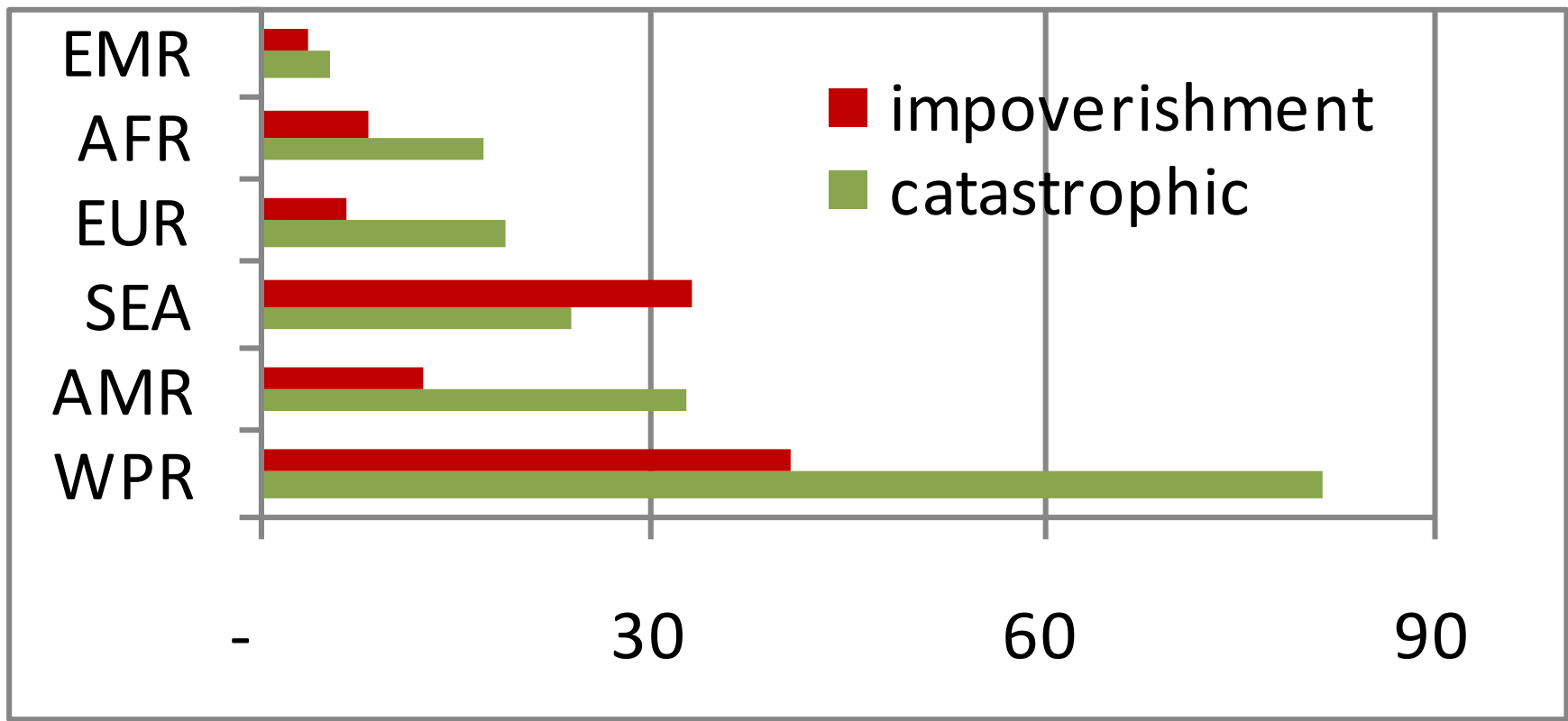


- Insufficient vehicles
- Inadequate supervision of patients beyond hospital
- Interruption in supply chains
- Unacceptable rates of "first line" treatment failure
- No response to evidence of "first line" failure
- Sloppy "second line" treatment practices
- Poor infection control in hospitals (over-crowding)
- Missing laboratory support structures (resistance monitoring)

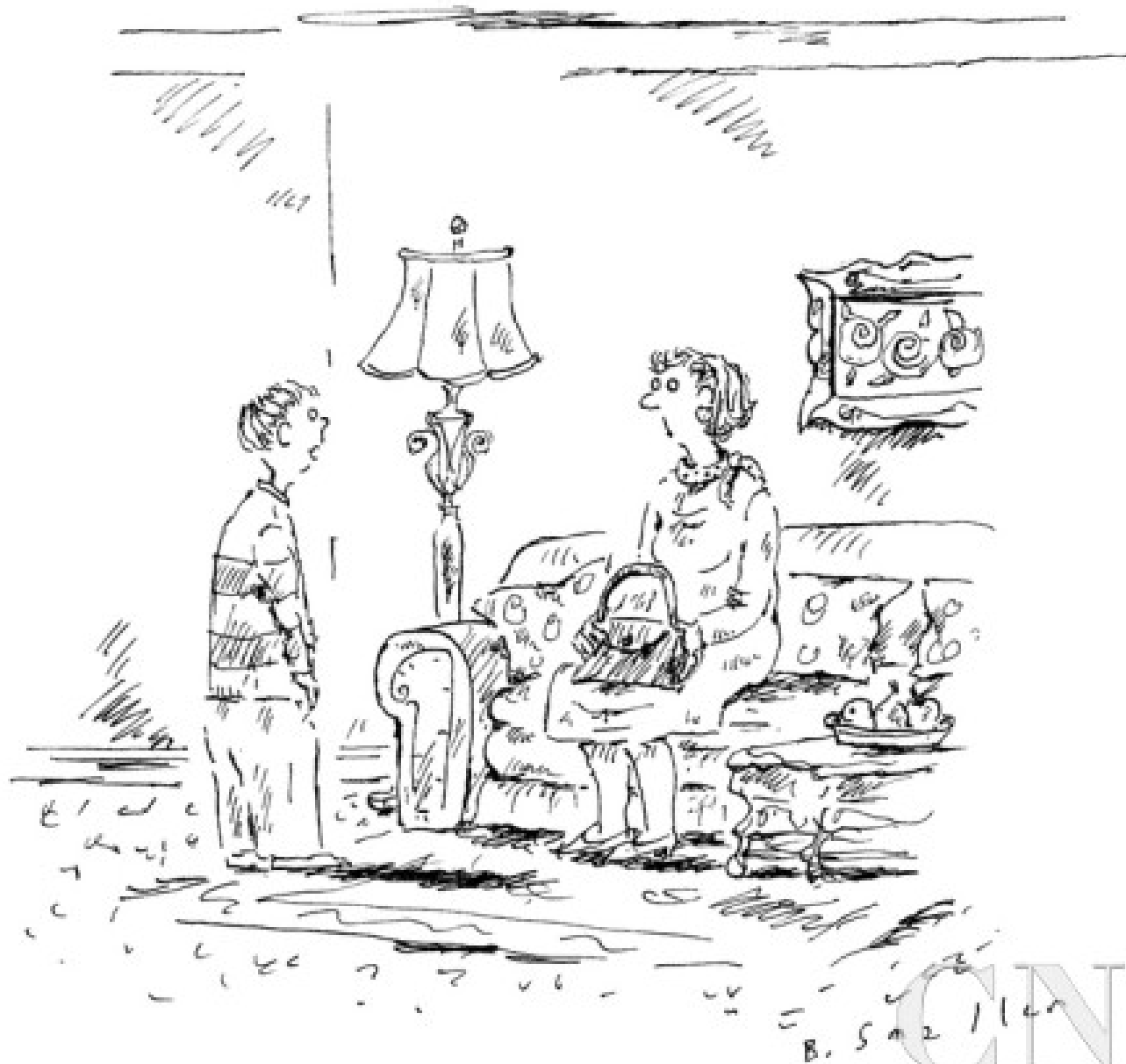


Enormous Inequities in Financing of Health:

>100 million impoverished due to out of pocket expenditures

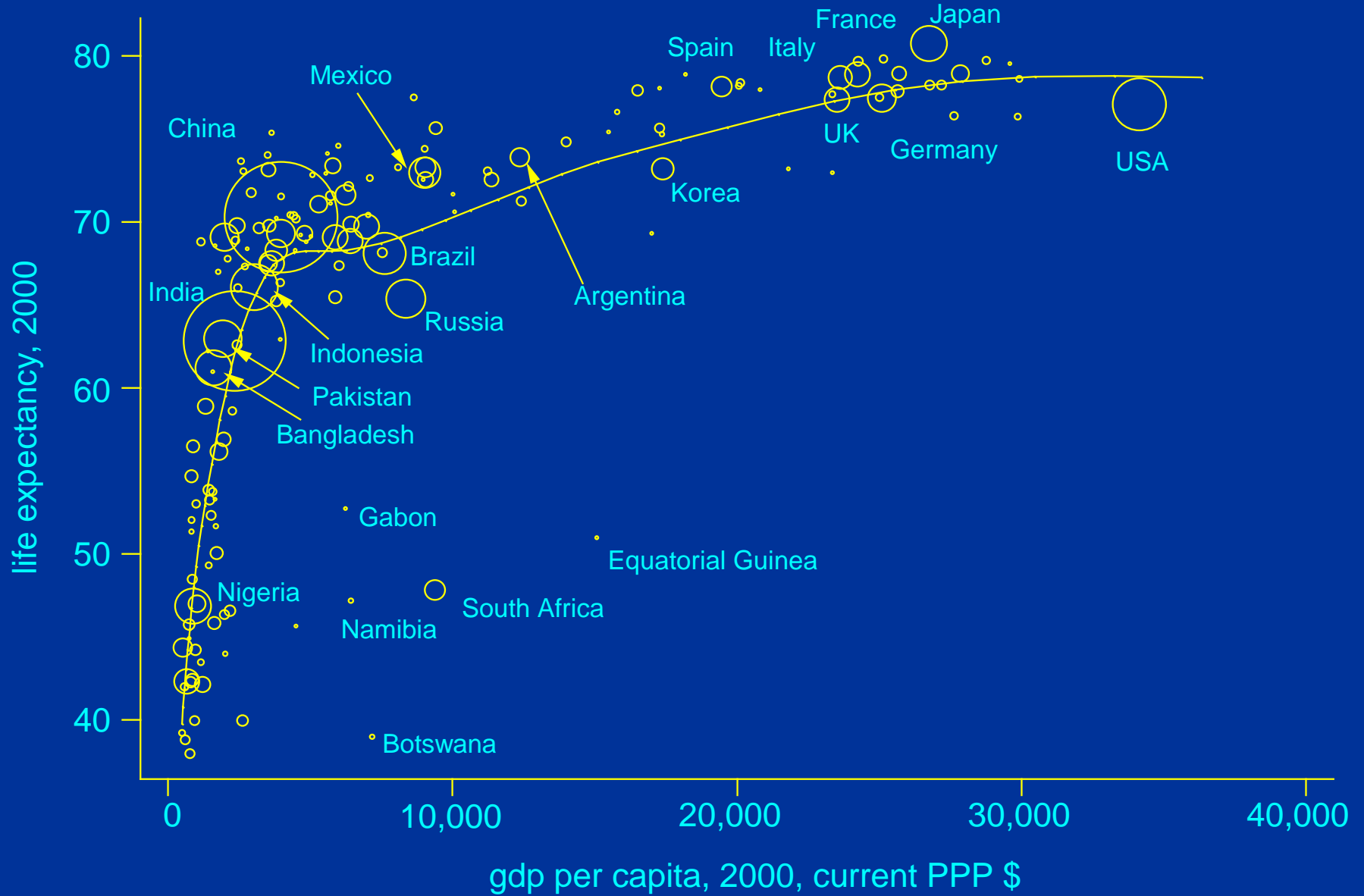


Number of people (million)



"When I grow up, I want to go into medicine and help people who can pay out of pocket."

Health and Development - Globally





Health and Development

"People in poor countries are sick not primarily because they are poor but because of other social organizational failures including health delivery, which are not automatically ameliorated by higher income"

Angus Deaton, WIDER Annual
Lecture, September 29, 2006.



Widespread Shortfalls in Delivery

- **Scale** --- safe, proven and cheap interventions not reaching those in need
- **Scope** --- comprehensive services responding to needs and expectations are the exception
- **Distribution** --- those with unmet needs are disproportionately those with lesser means
- **Protection/Safety** --- too many are worse off through encounters with the health system
- **Systems capabilities** --- primitive frameworks and responses to dealing with complex challenges



2

Setting ambitious targets for
improved delivery in health



" there is no good biological reason why someone living in Sierra Leone's life expectancy should be a full 50 years lower than someone living in Japan".

Sir Michael Marmot, Chair of the `WHO Commission
on Social Determinants of Health



"although the plight of the bottom billion lends itself to simple moralizing, the answers do not!"

Paul Collier

The Bottom Billion



Edwin Chadwick



- Public Health reformer
- Conducted first major study into inequalities in health
- *Report on the Sanitary Conditions of the Labouring Poor in Great Britain, 1842*



Life Expectancy in 1840

	Profess- ional	Trade	Labourers
Rutland	52	41	38
Liverpool	35	22	15

Chadwick (1842) quoted in Fraser (1984: 3A)



A new type of health worker

'that for the general means necessary to prevent disease, it would be good economy to appoint a district medical officer, independent of private practice, with the securities of special qualifications, and responsibilities to initiate sanitary measures and reclaim the execution of the law''

Sir Edwin Chadwick — Report on the Sanitary Condition of the Labouring Population



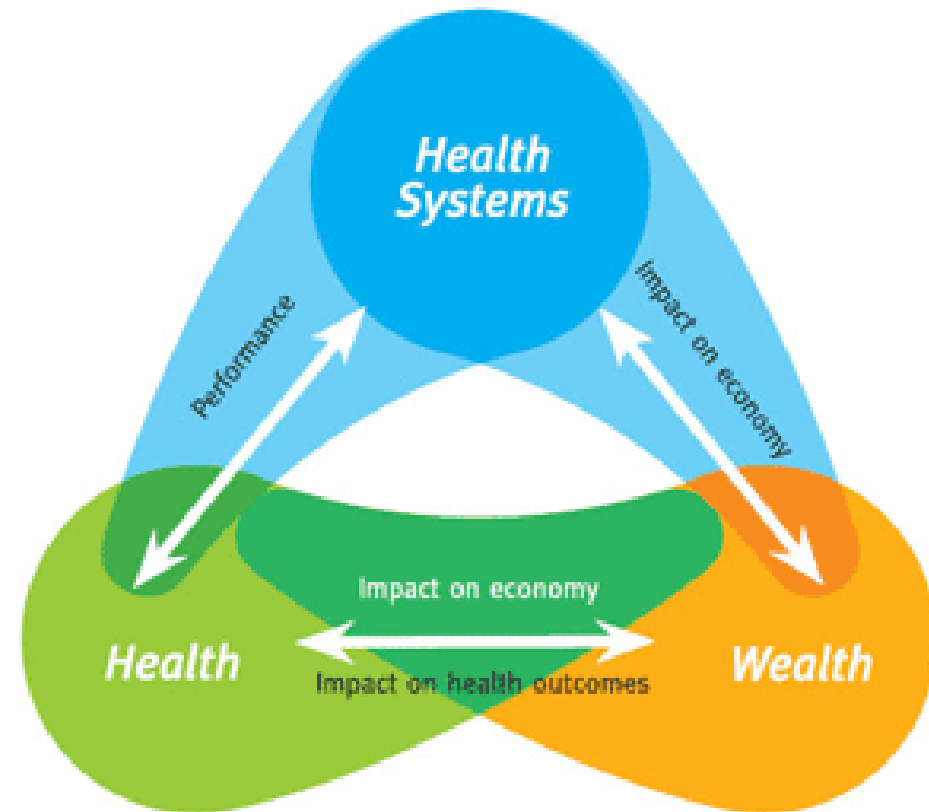
Critical Public Health Occupations in Liverpool 1847

- Medical officer of health
- Borough Engineer (Newlands)
- Inspector of Nuisances (Fresh)
- Scavengers
- Lodging house inspectors
- House-to-house visitors



Links Between Health and Wealth

- 100 million people impoverished by medical expenses each year
- 24% of “full income*” growth in developing countries from health improvements
- 10% increase in life expectancy associated with 0.4% increase in annual economic growth



WHO Euro: Tallinn Conference 2008

Healthcare is not an expenditure, but an investment

* Full income is defined as the sum of the income growth measured in the national income accounts, plus the value of the change in mortality in that period



The Dual Case for Universal Health Coverage

When all people have access to quality, affordable healthcare without undue financial hardship...



Better health outcomes

Better development outcomes



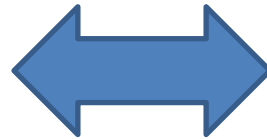
Reduced poverty and hardship

Increased productivity and equity



World Bank New Goals

**End
Extreme
Poverty by
2030**



**Boost
shared
prosperity
(increase income
of bottom 40%)**



Universal Health Coverage by 2030





Translating WB Goals to the Health, Nutrition and Population (HNP) Global Practice

HNP



Financial Protection

No one is kept in, or pushed into, poverty due to out-of-pocket expenditures.



Service Coverage

Everyone receives the quality health services they need and is protected from public health risks.



Healthy Societies

All societies invest in the structural foundations of good health, e.g. water & sanitation, education, social protection, transport, gender, environment, etc.



3

A “third” wave of research in
global health



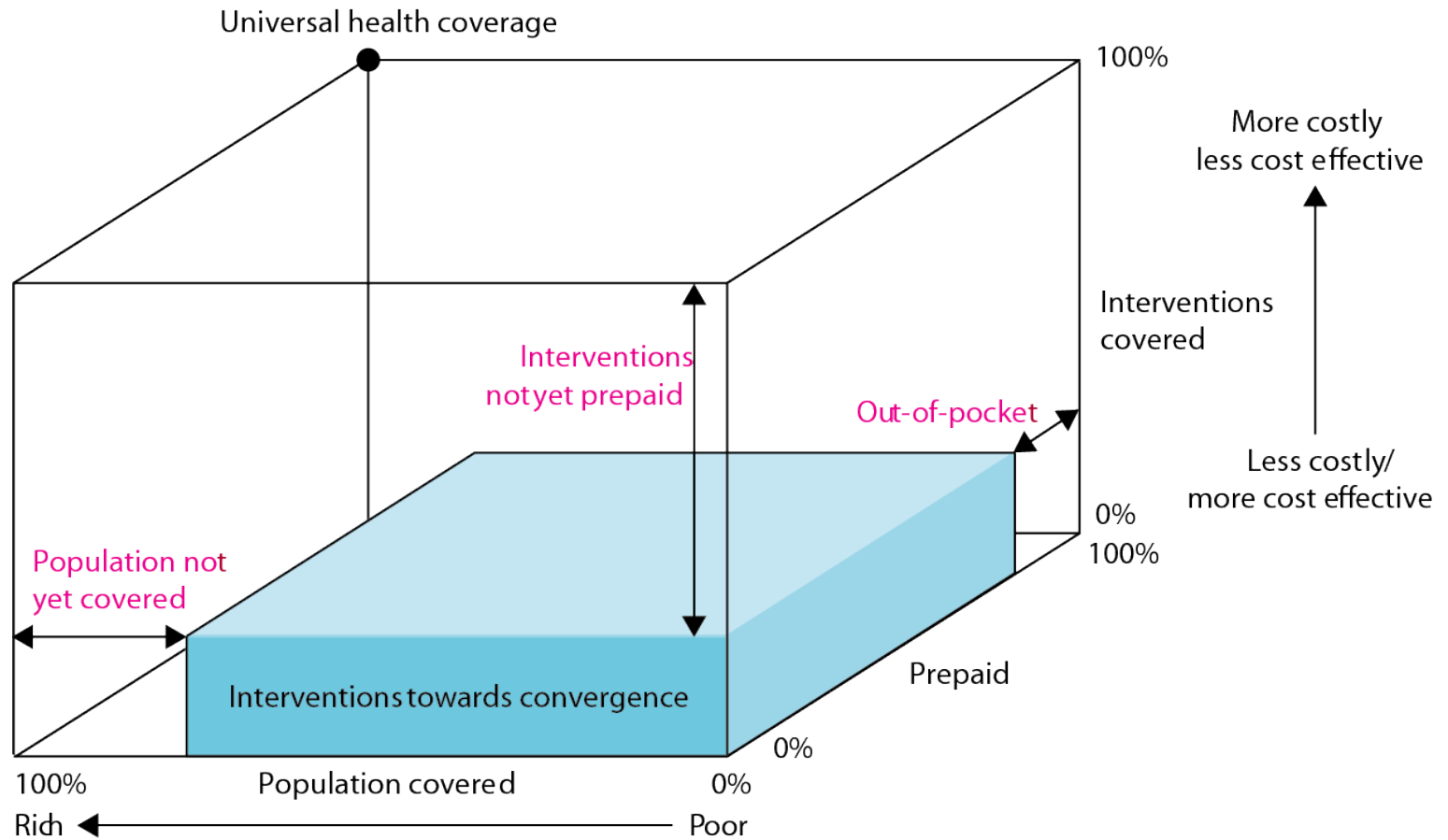
Achieving UHC how?

A 3rd Wave of Global Health Research

- 1st Wave – Biomedical
- 2nd Wave – Clinical-Epidemiological
- 3rd Wave – Systems / Science of Delivery

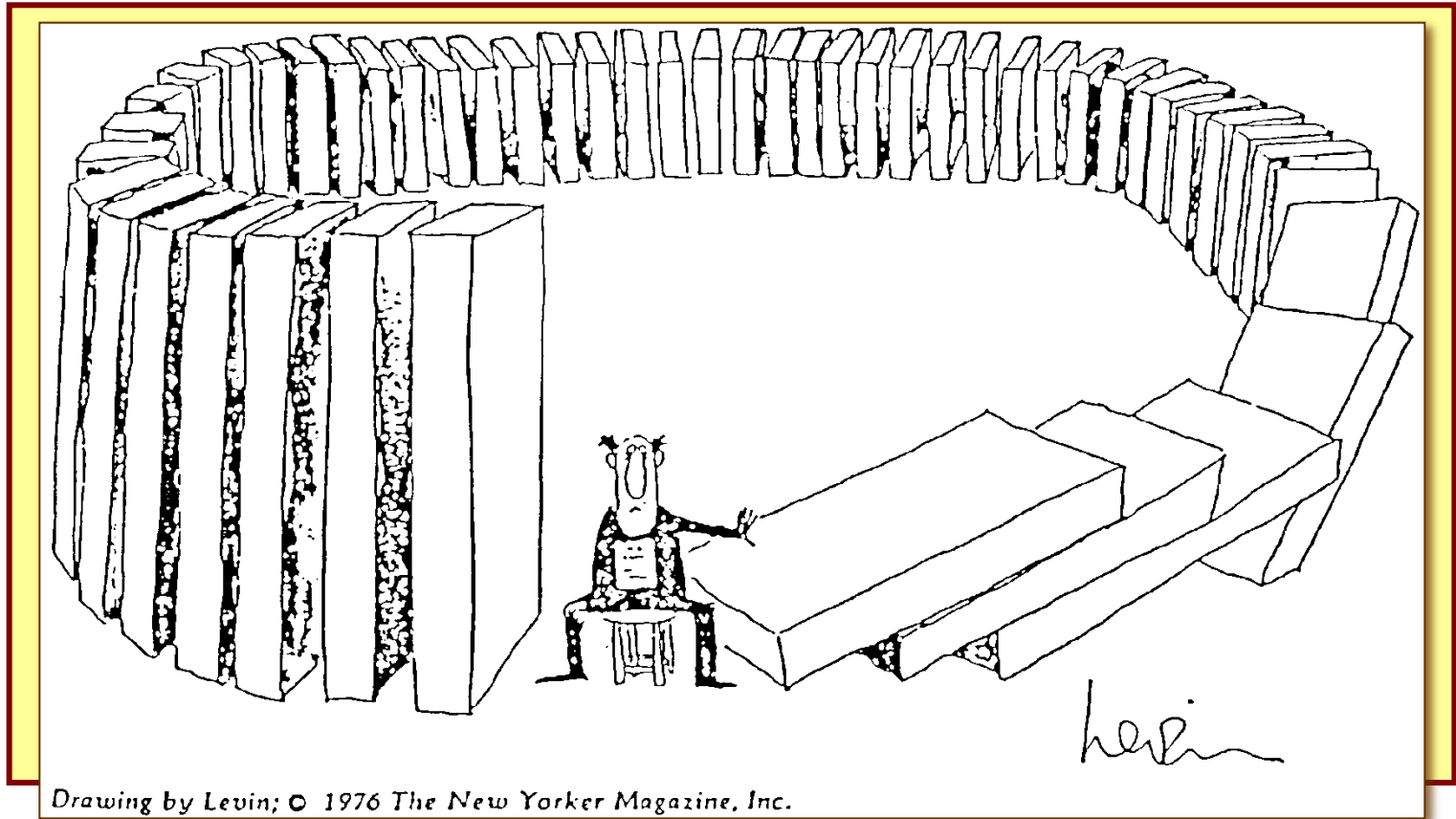


Progressive Universalism





Riding the Third Wave!



Drawing by Levin; © 1976 The New Yorker Magazine, Inc.



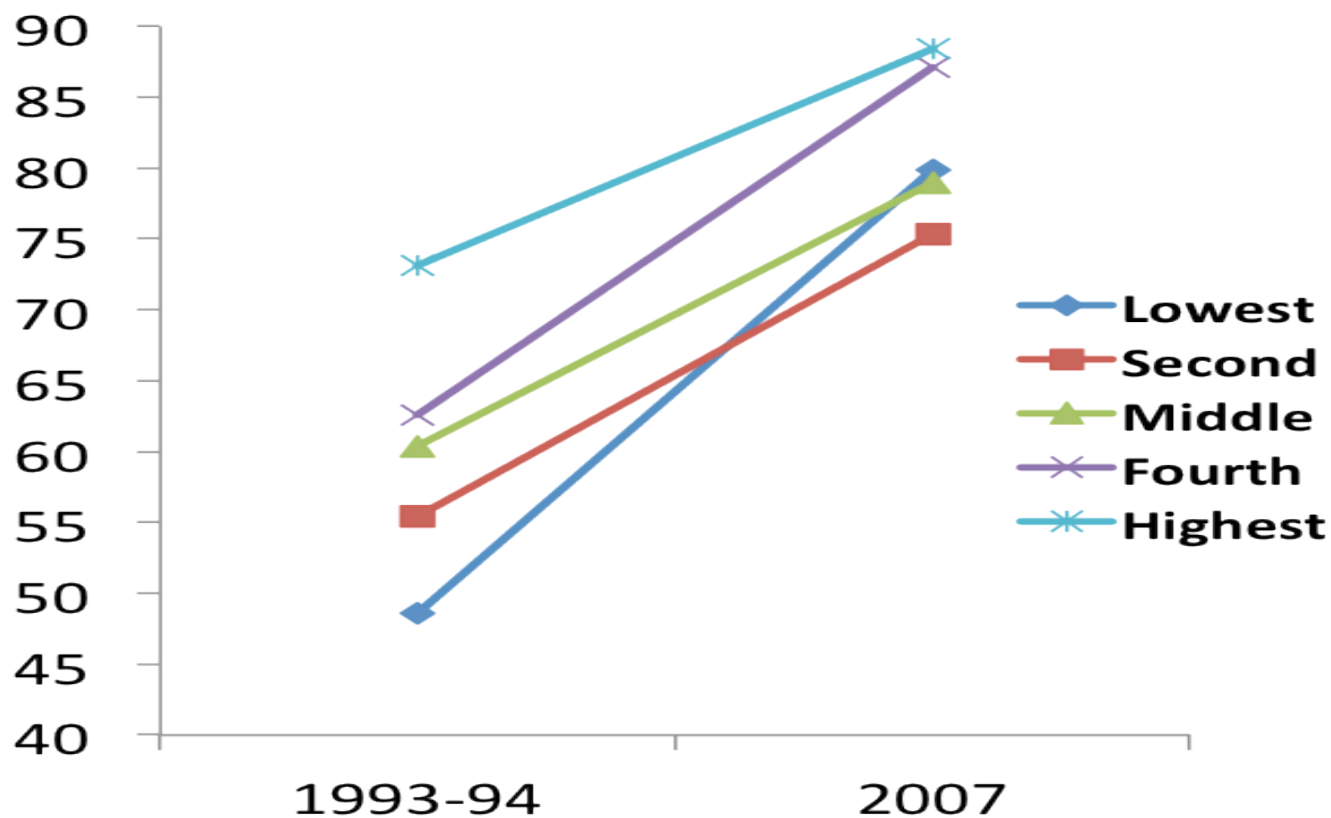
Service Coverage



Breaking the Inverse Care Laws!

Immunization Coverage Trend by Asset Quintile, Bangladesh

(Source: Adams et al. Lancet 2013)

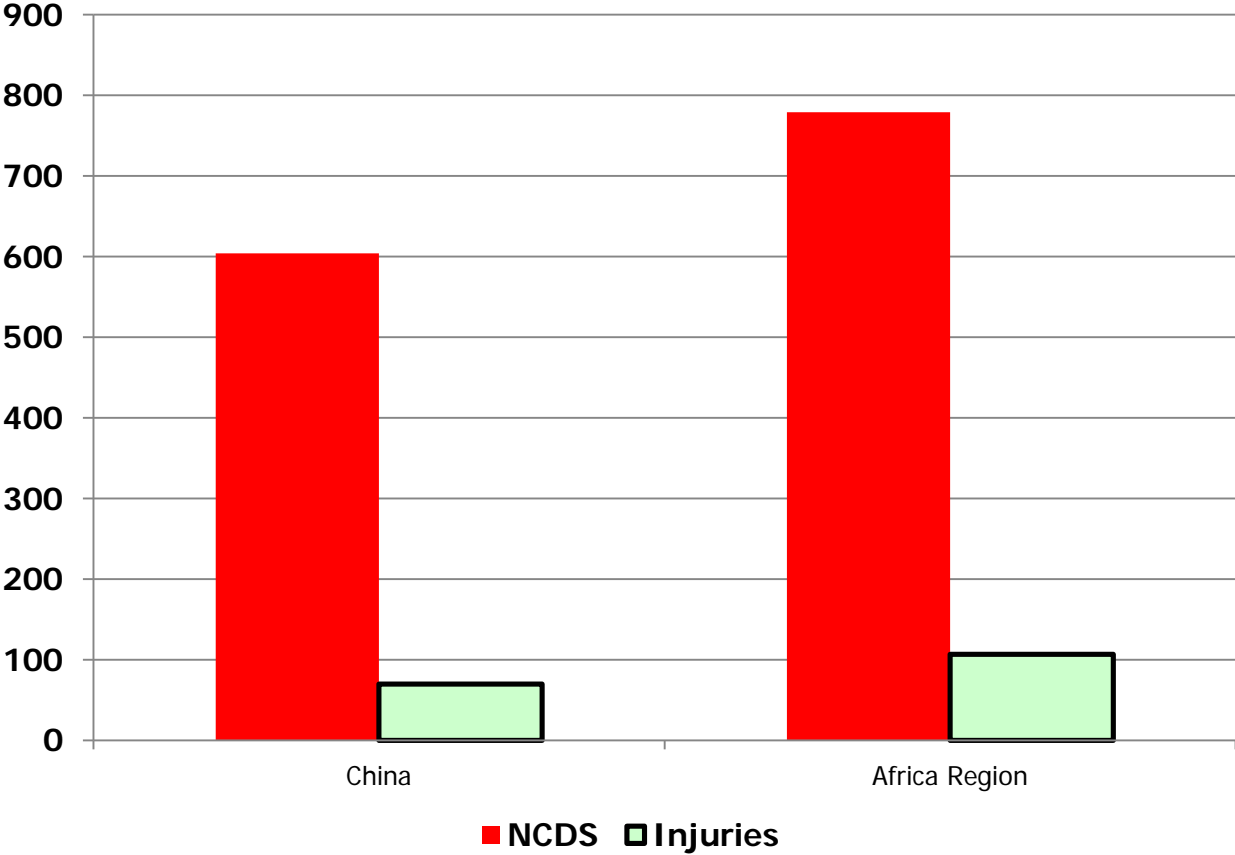


Source: BDHS data

NCDs Can No Longer Be Ignored

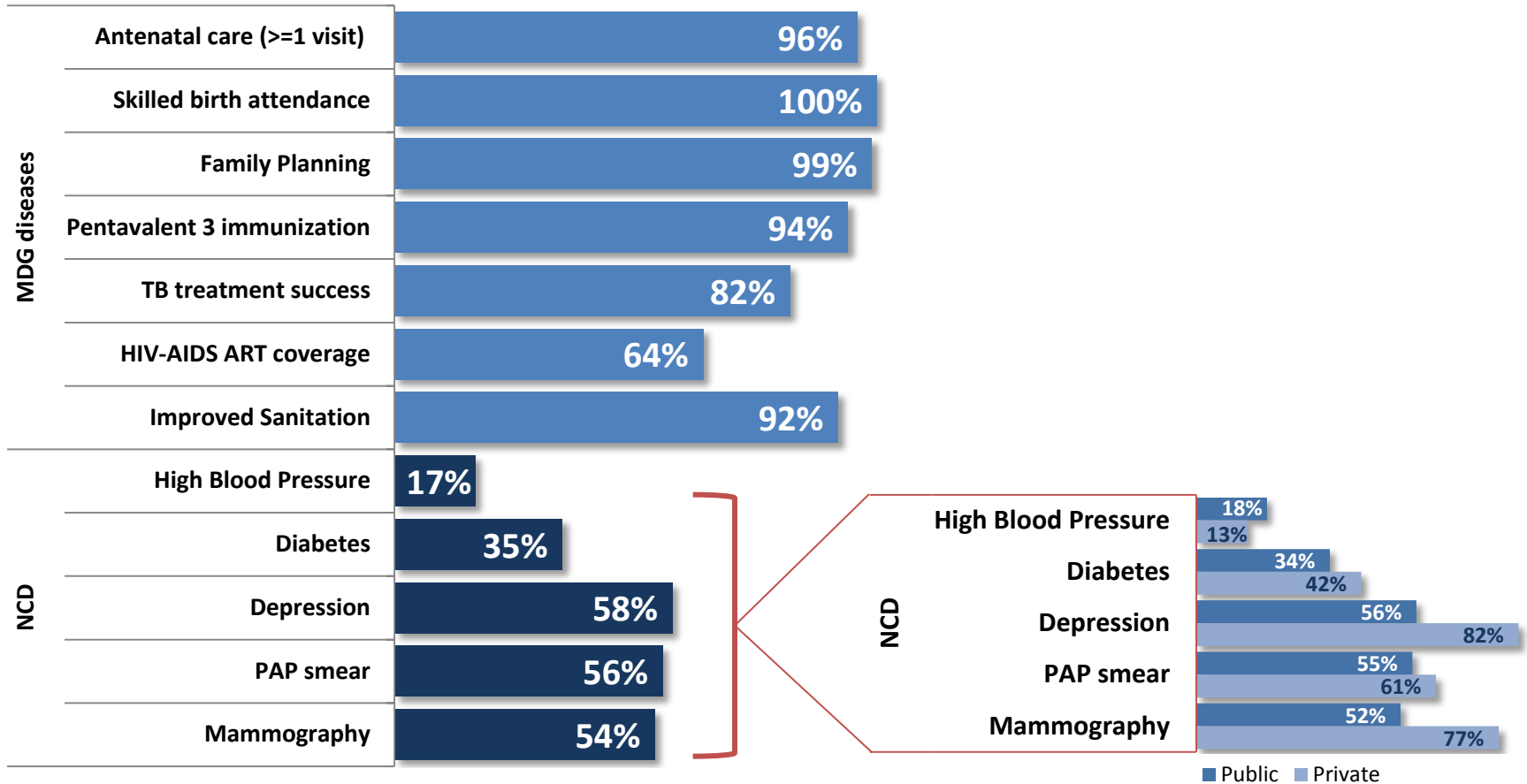
Higher mortality due to NCDs and Injuries in Africa than in China!

Age-standardized mortality rates
(per 100,000 population), 2008





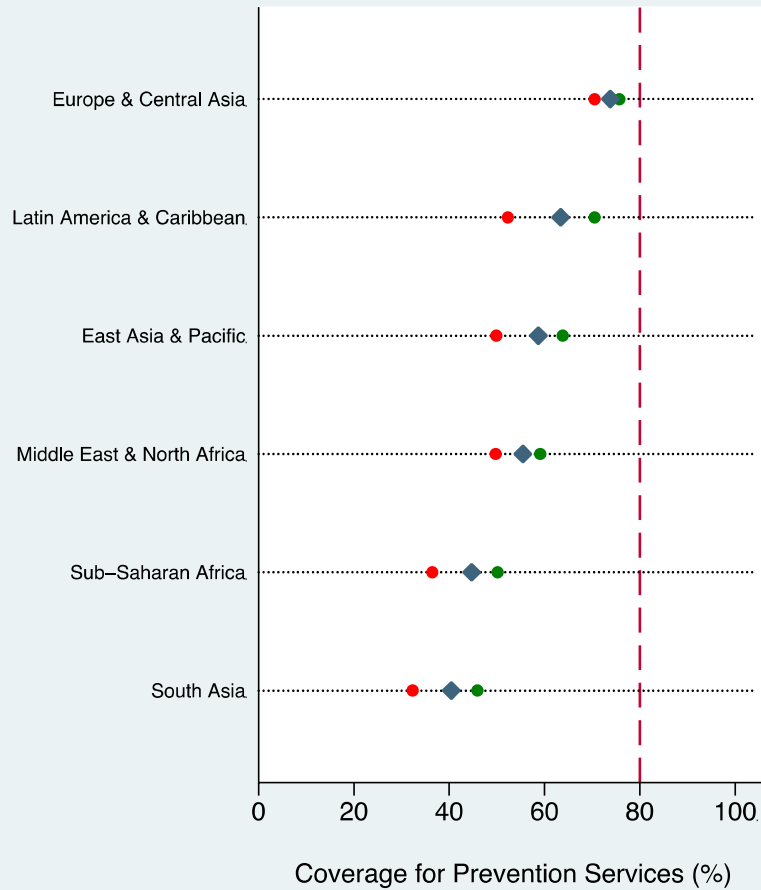
Measuring Effective Coverage: MDG and NCD Interventions in Chile (Source J. Vega 2014)



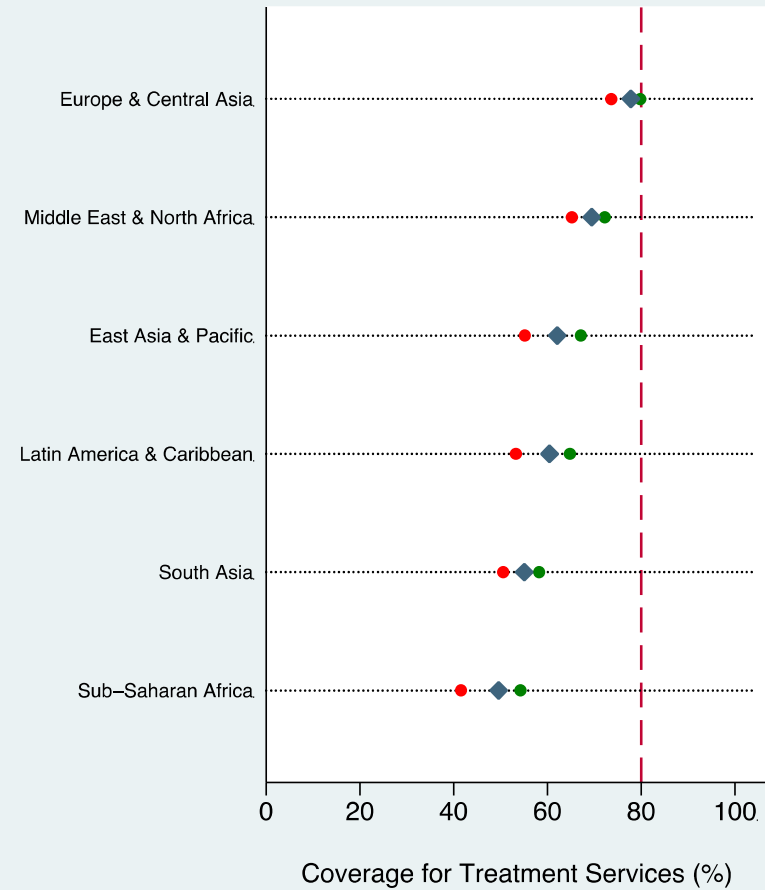
Cross-country composite measures of Service Coverage

(Source: WHO +WBG 2014)

Coverage for Prevention and Treatment Services



Source: World Health Surveys (2002–03).
Prevention services: Mammogram; Pap Smear; 4+ antenatal visits; Full immunization; Improved water; Adequate sanitation; Non-use of tobacco.

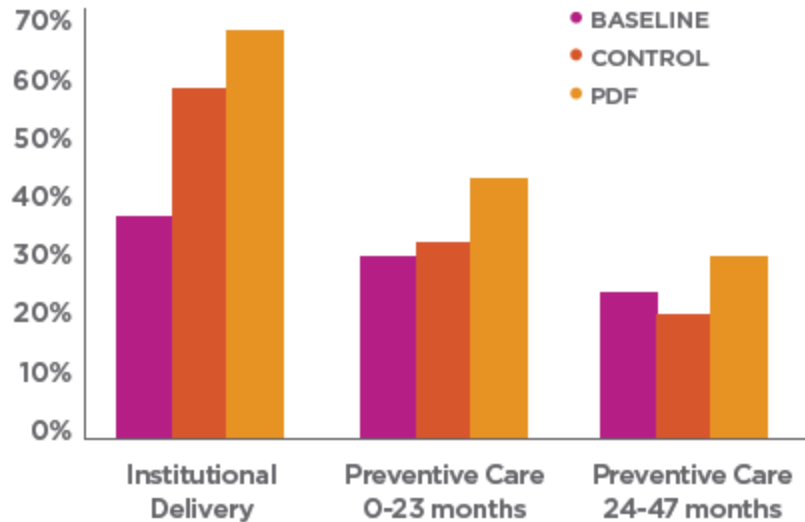


Source: World Health Surveys (2002–03).
Treatment services: Skilled birth attendance; ARI treatment; TB treatment; Diabetes treatment; Dental care; Eye surgery.

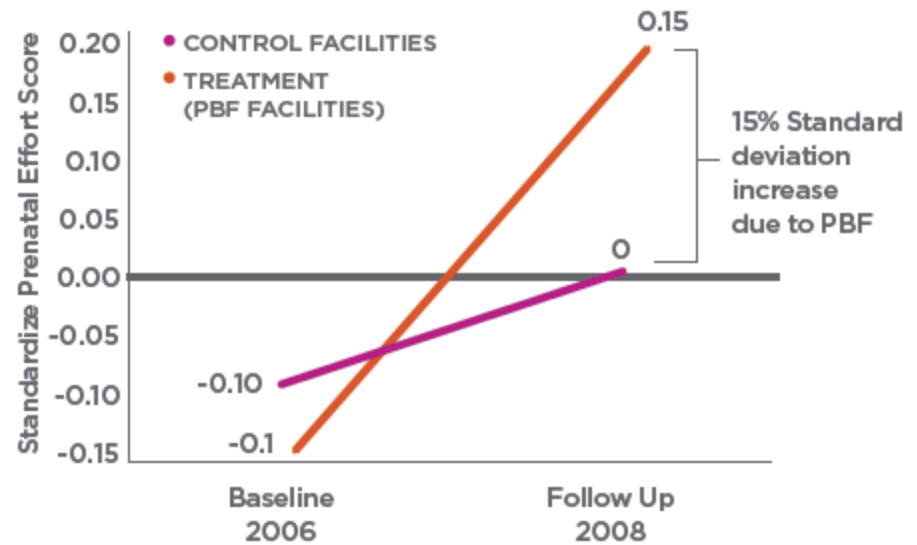


Results-based Financing of Services in Rwanda: Increased Coverage and Quality of Care

Increase in coverage of services in RBF districts as compared to baseline and control districts



Increase in quality of care in RBF facilities compared with control facilities



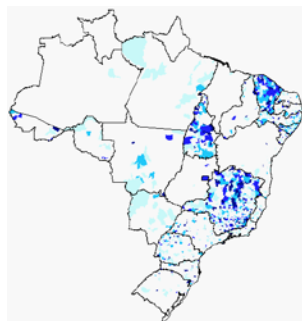
Source: Basinga et al. 2011



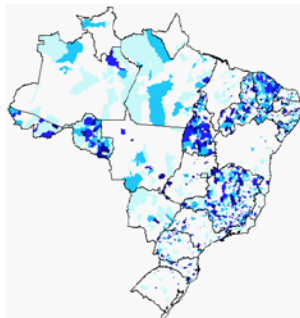
New Models of Primary Care! Increasing Coverage of Family Health Teams, Brazil (1998-2006)

0% 1 to 25% 25 to 50% 50 to 75% 75 to 100%

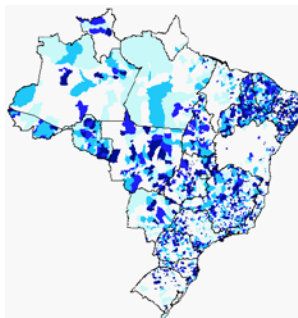
1998



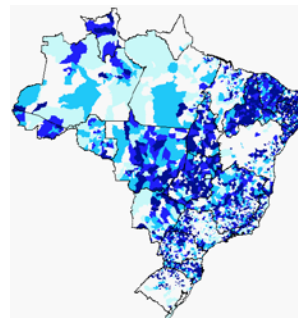
1999



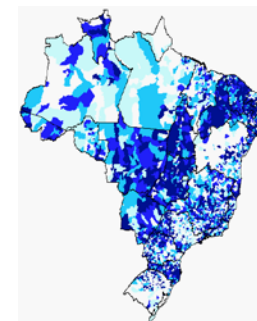
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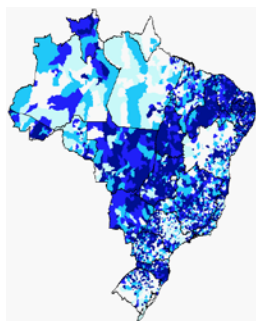
2001



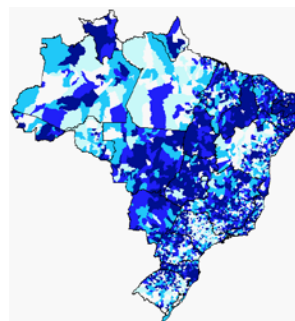
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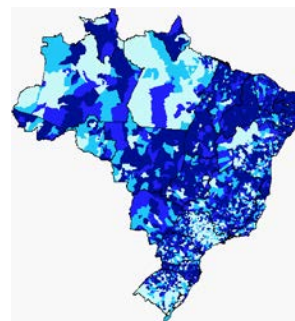
2003



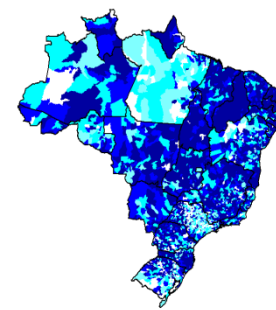
2004



2005



2006



Source: SIAB - Sistema de Informação da Atenção Básica

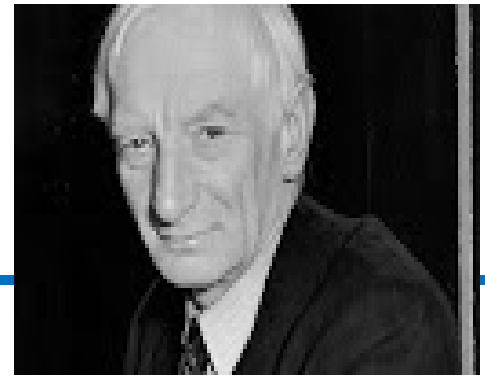


Financing Coverage



Beyond

Bismarck and Beveridge



- Bismarck: 1883 –
 - multi-payer system of employer/employee-based contributions, aka social health insurance.
- Beveridge: 1942 -
 - Tax financed, single payer, comprehensive services, free at point of service
- Low levels of “formal employment” and “tax collection” in many LMICs require going beyond Bismarck and Beveridge financing



Emerging Financing Innovations :

- Cambodia:
 - Health Equity Funds – a 100% reimbursement for health care costs of the poor
- Pakistan:
 - Mobile phone facilitated access to philanthropic grant to cover costs for catastrophic care amongst the poor
- Bangladesh:
 - “Buffer fund” – low-interest loans to cover costs of catastrophic care for poor and non-poor



Single Greatest Opportunity To Curb NCDs is Tobacco Taxation

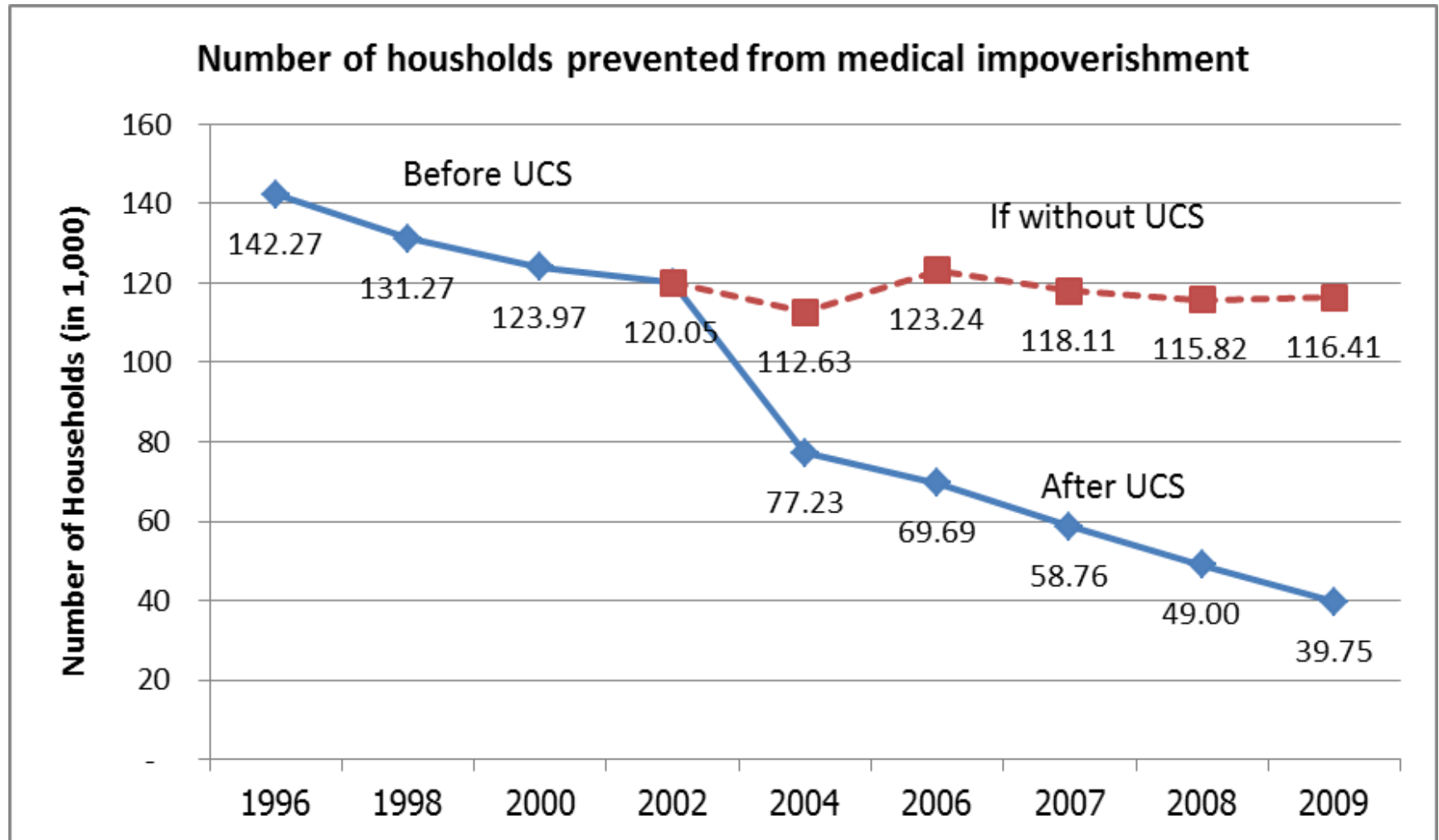
50% rise in tobacco price from tax increases in China

- prevents 20 million deaths + generates extra \$20 billion/y in next 50 y
- additional tax revenue would fall over time **but** would be higher than current levels even after 50 y
- largest share of life-years gained is in bottom income quintile

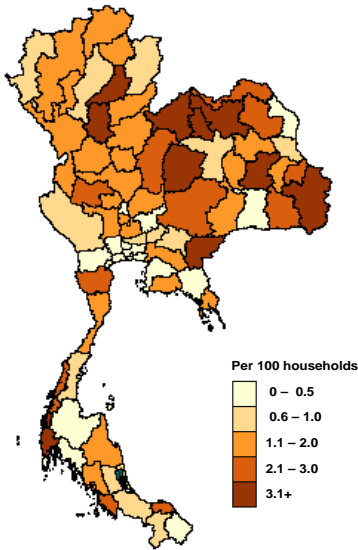


Source: Global Health
2035: Lancet 2013.

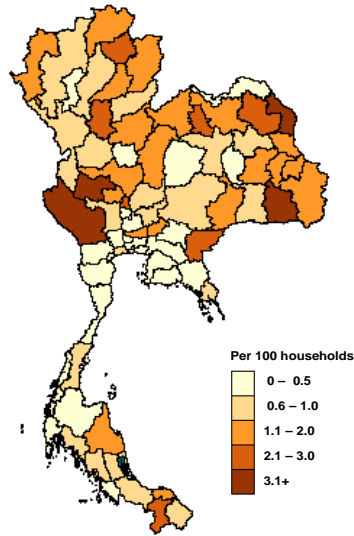
Health impoverishment in Thailand: before/after the Universal Coverage Scheme (UCS)



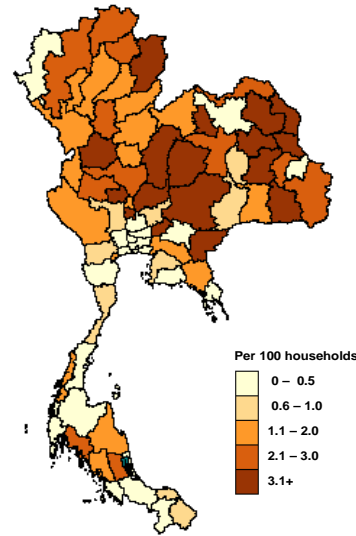
Sub-national health impoverishment, Thailand 1996 to 2008



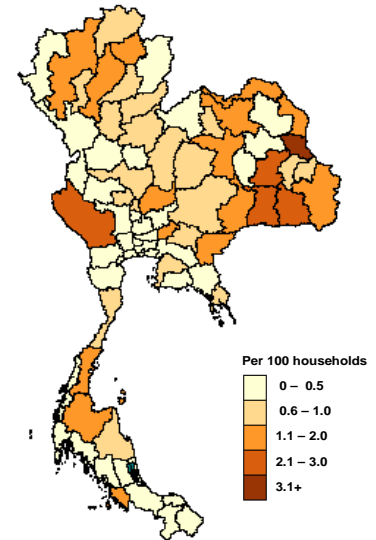
1996



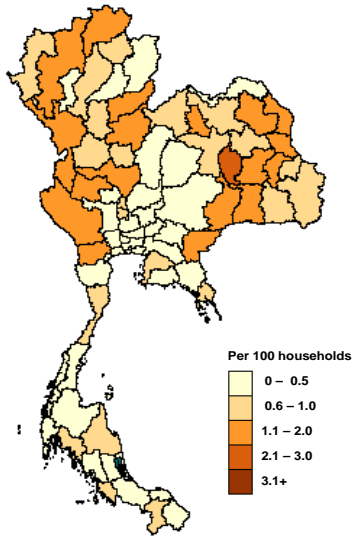
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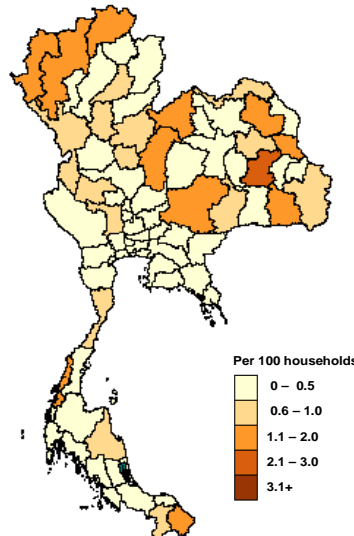
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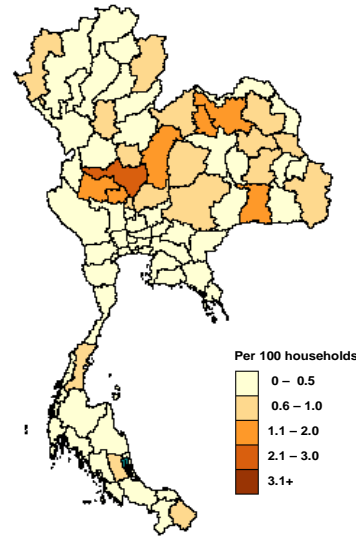
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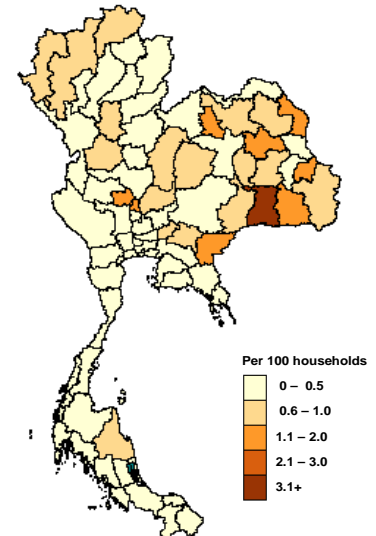
2004



2006



2007



2008

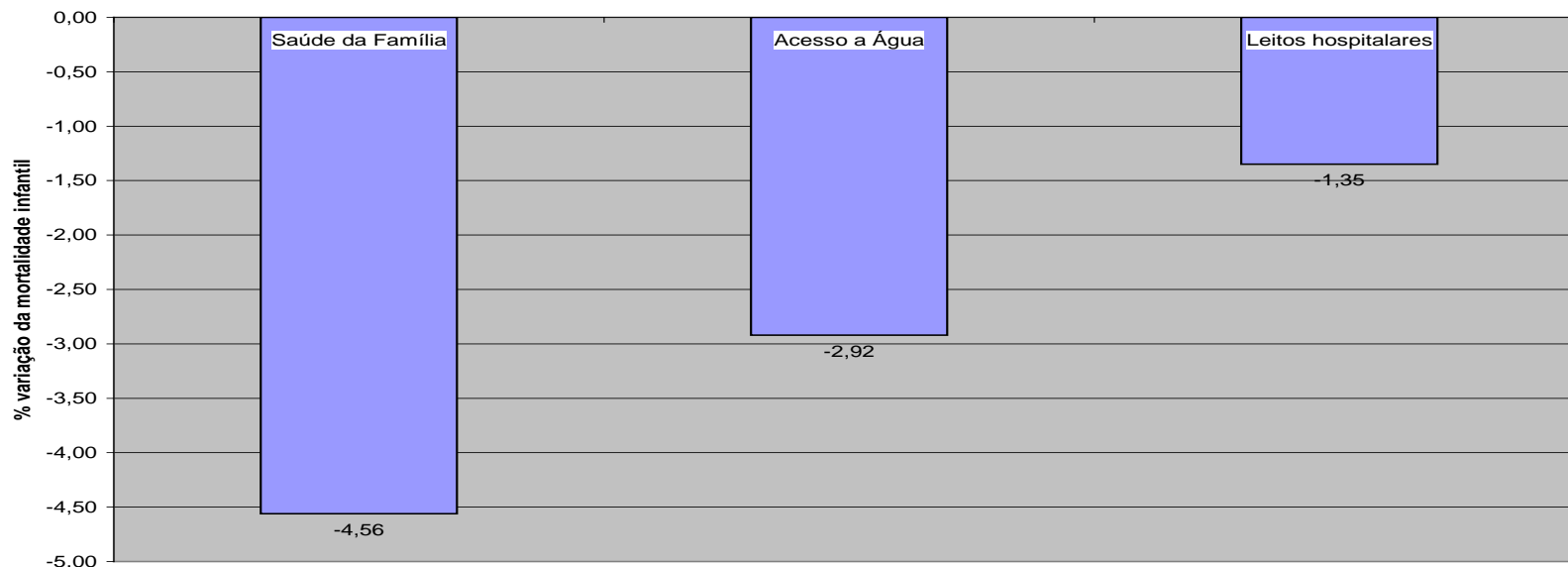
Assessing Impact of UHC Reforms



“Dose-Response”

A 10% increase in Family Health Team coverage resulted in 4,6% decrease in INFANT mortality

Percentuais de variação da mortalidade infantil associados a 10% de incremento na cobertura da Saúde da Família, de acesso a água e de leitos hospitalares por mil habitantes. Brasil, 1990-2002

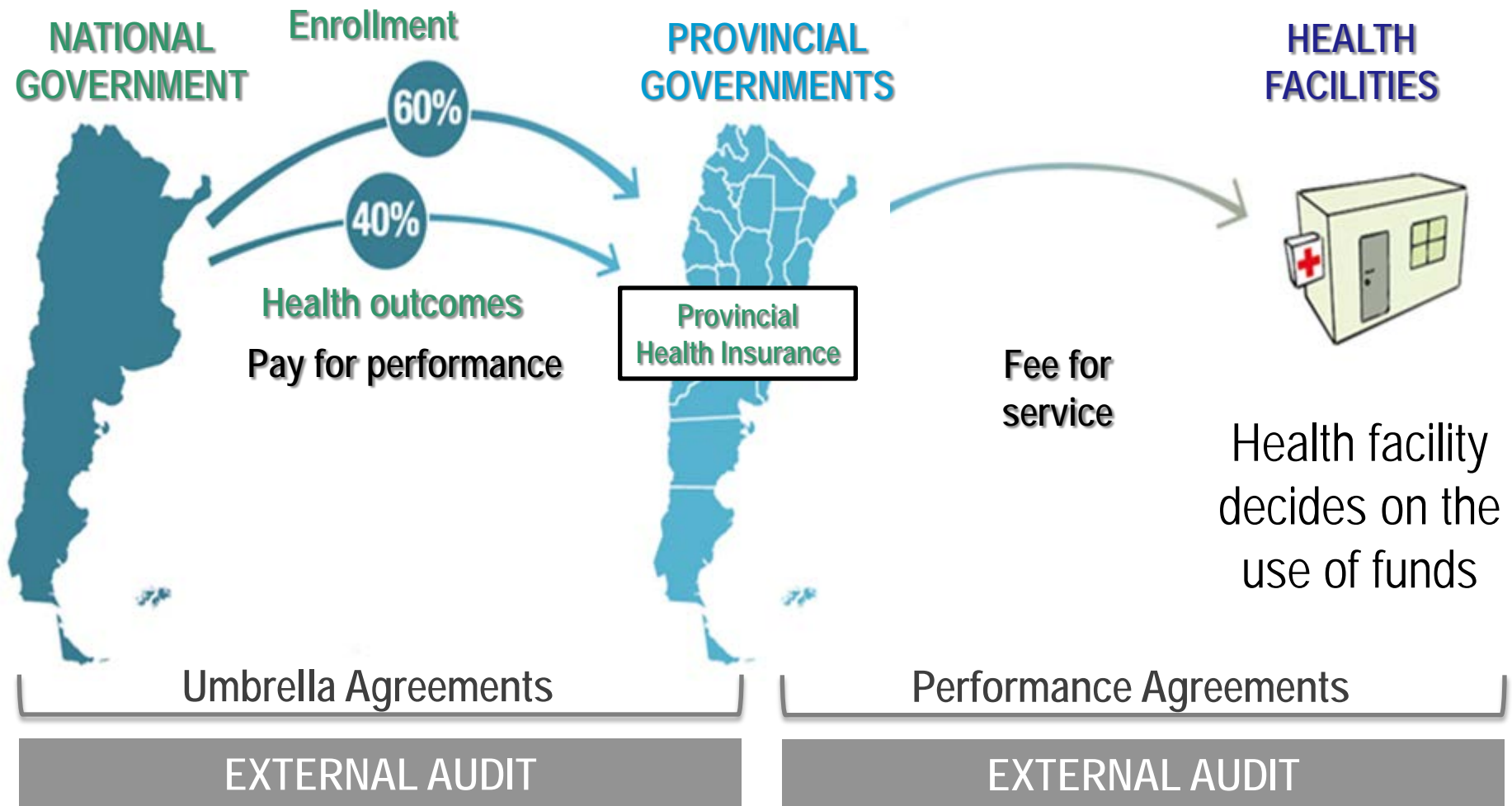


Evaluation of the impact of the Family Health Program on infant mortality in Brazil, 1990–2002

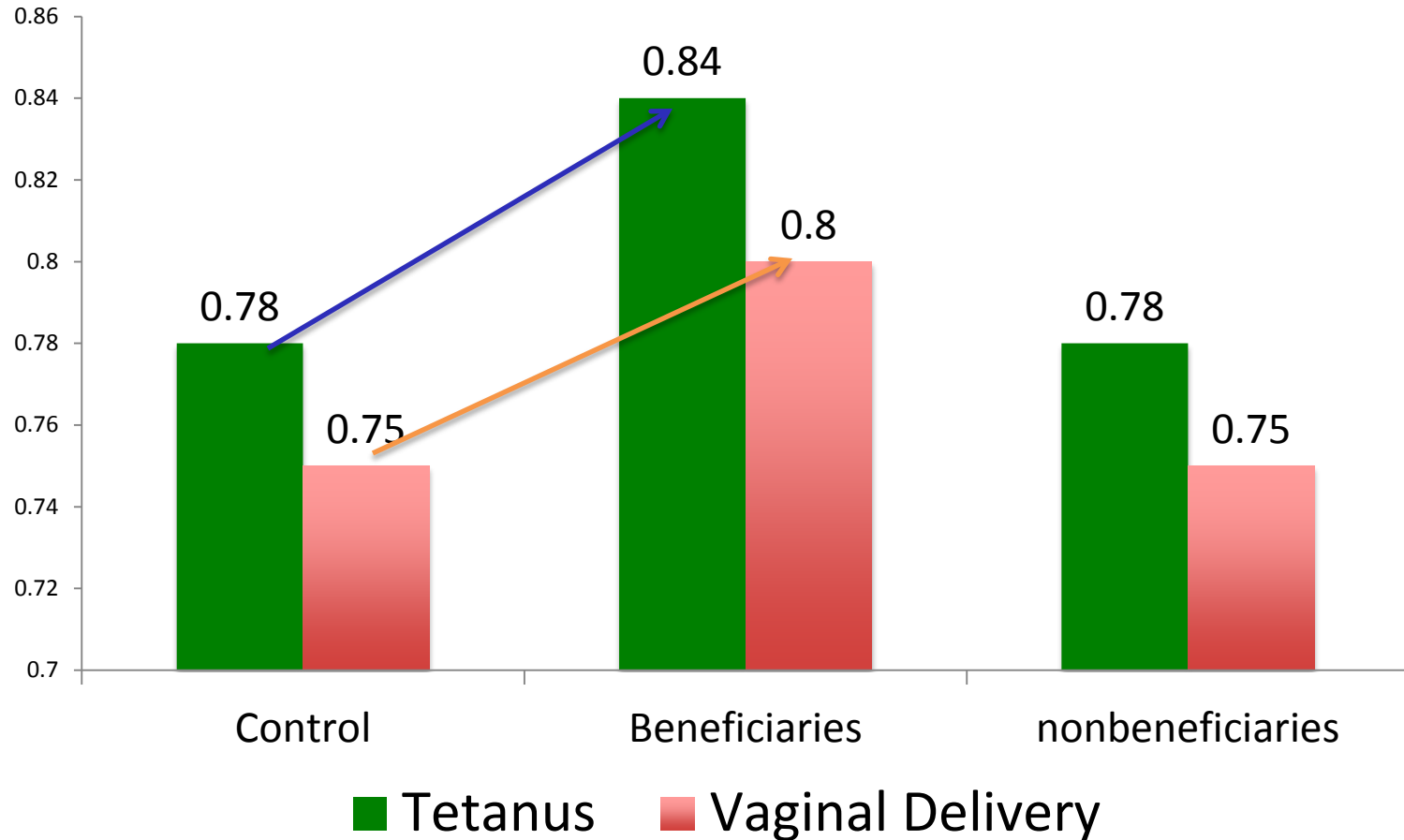
James Macinko, Frederico C Guanais and Maria de Fátima Marinho de Souza

J. Epidemiol. Community Health 2006;60;13-19
doi:10.1136/jech.2005.038323

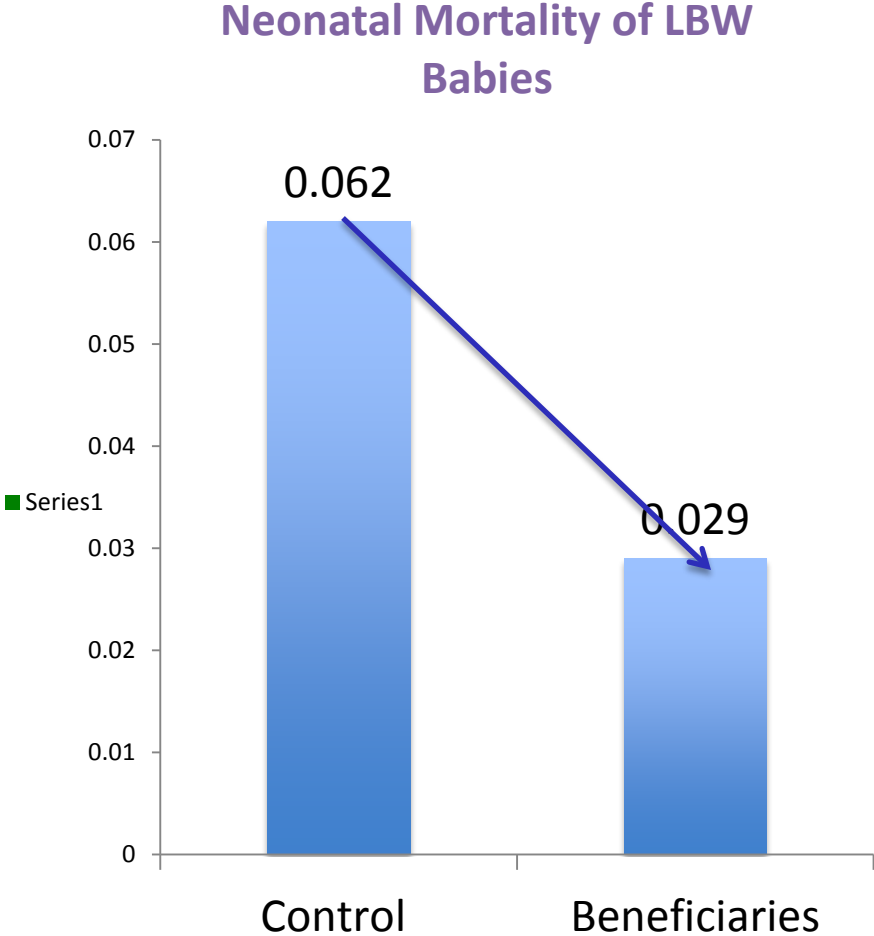
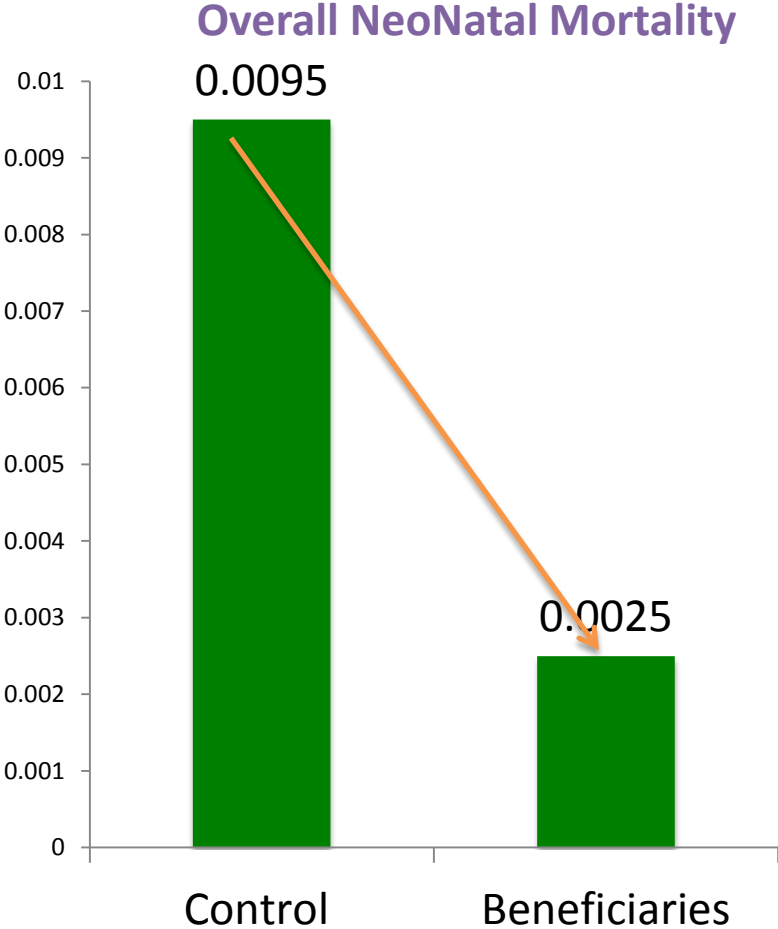
Argentina's Plan Nacer: Incentivized Financing Scheme



Plan Nacer Increases Beneficiary Prenatal Care Quality



Plan Nacer Reduces Neonatal Mortality

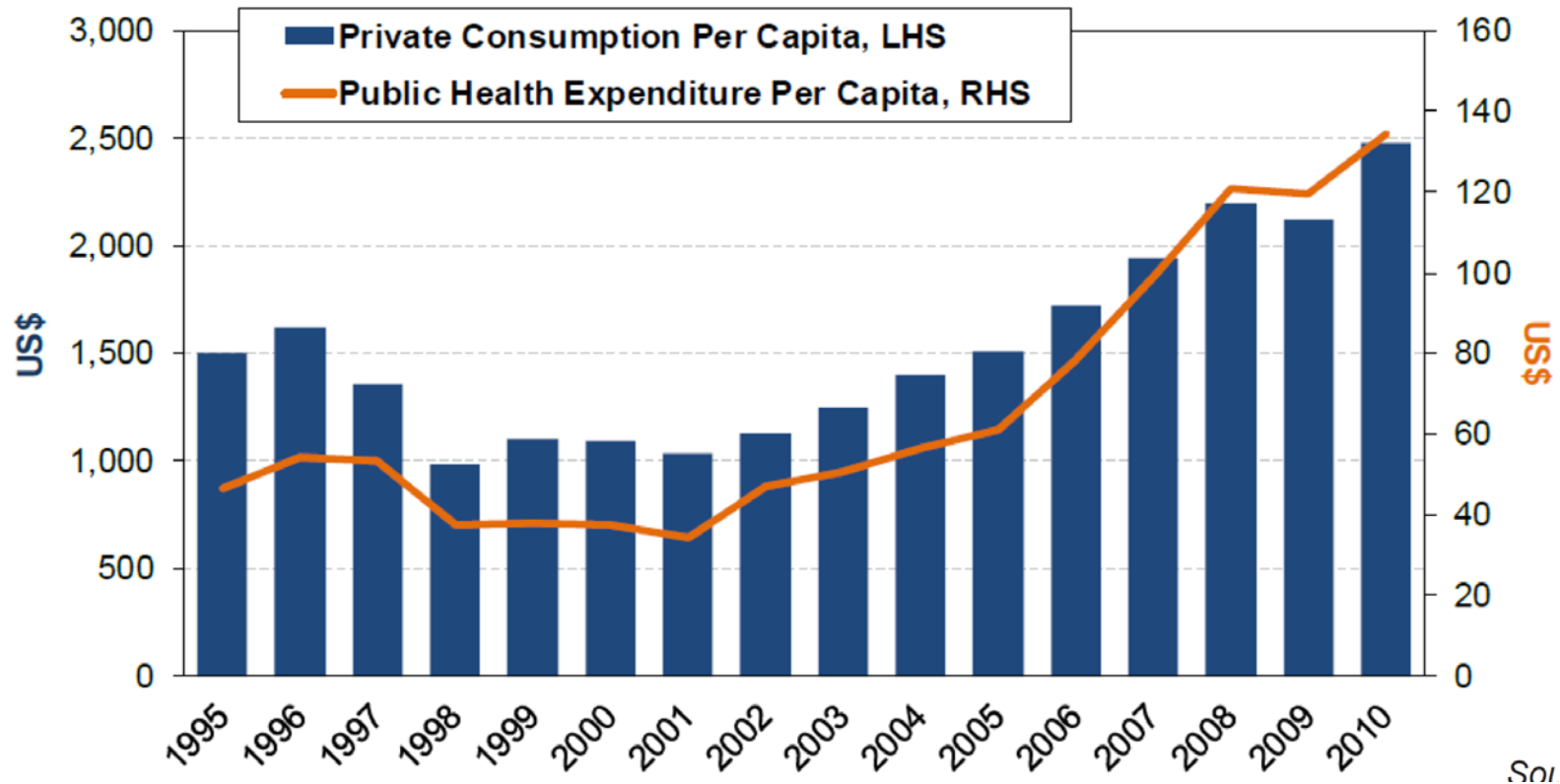


Lessons from Argentina Plan Nacer

- Very effective
 - More & better prenatal care
 - Better birth outcomes & less neonatal mortality
 - No negative effect on Non-Beneficiary outcomes
- Innovative
 - Incentives small [↑] in funding (2%)
 - Leveraged other [↑] 98%
 - Increased productivity
- MNCH model for MICs post 2015?



Macro-economic impact of Thailand UCS: increased private consumption, Bhartia et al 2013



Increase private consumption followed increase in public health spending, when UHC launched in 2002



4

Better “science” and “practice
of science” to inform “delivery”



Delivery research falling short too often

(Peters, Saharty and Siadat 2009)

- lacking taxonomic and conceptual rigor
 - same terms used to describe different reforms
- systemic weaknesses in methods/designs
 - From inference, to plausibility, to probability and explanatory study designs
- weak measures – from inputs to outputs to outcomes
- problems related to "generalizability" in various contexts...
- lack of standards for assessing the strength of evidence
- limited understanding of needs of decision-makers related to "evidence" on what works (and what doesn't!).



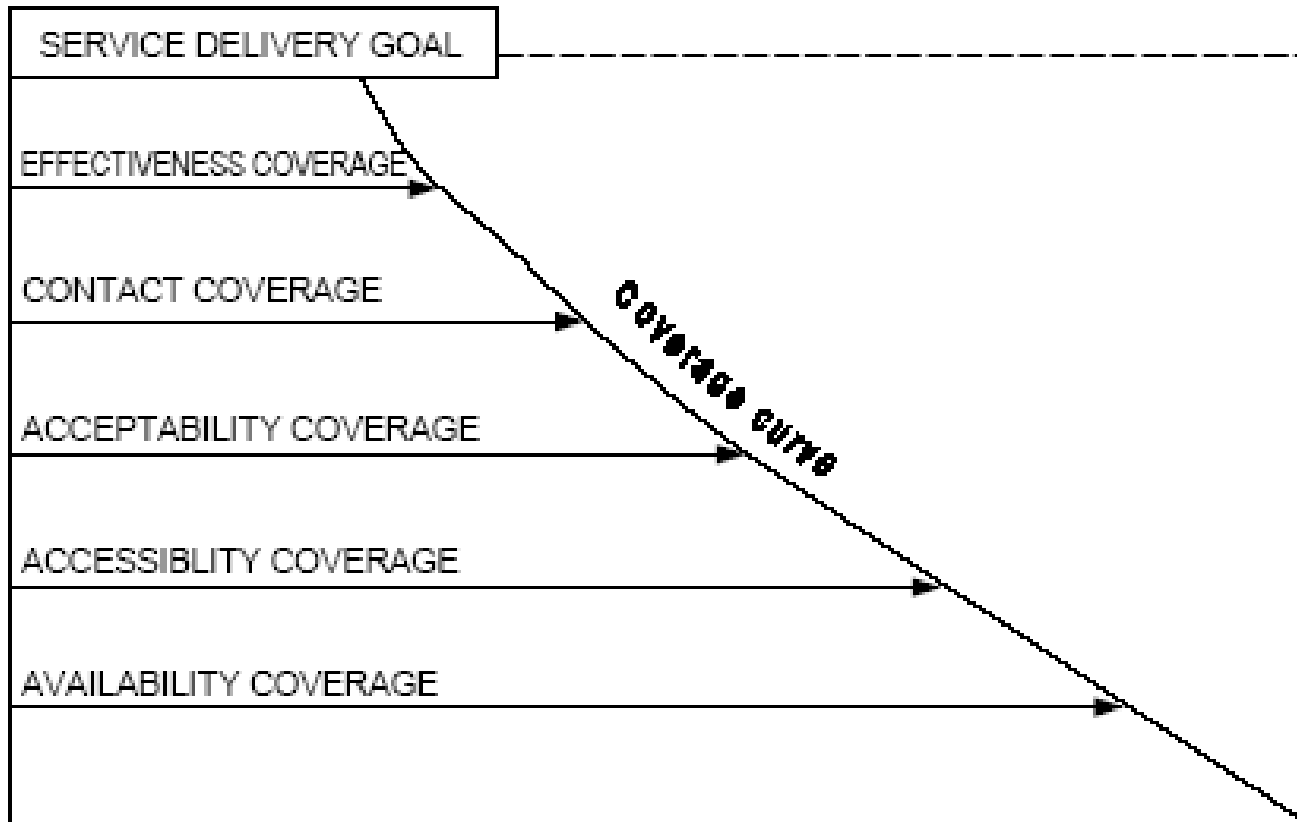
Short-comings increasingly visible against gold standards in clinical evidence...

- taxonomies
 - ICD, SNOWMED
- hierarchy of methods
- strength of evidence
 - GRADE, EPOC
- standards for research synthesis





Making (better) use of existing tools



Source: Tanahashi, T, 1978



Developing and reviewing “new” methods

ABHIJIT V. BANERJEE
& ESTHER DUFLO

*'A marvelously insightful book by two outstanding
... researchers on the real nature of poverty.'*
AMARTYA SEN

POOR ECONOMICS



rethinking poverty
& the ways to end it

SYSTEMS THINKING

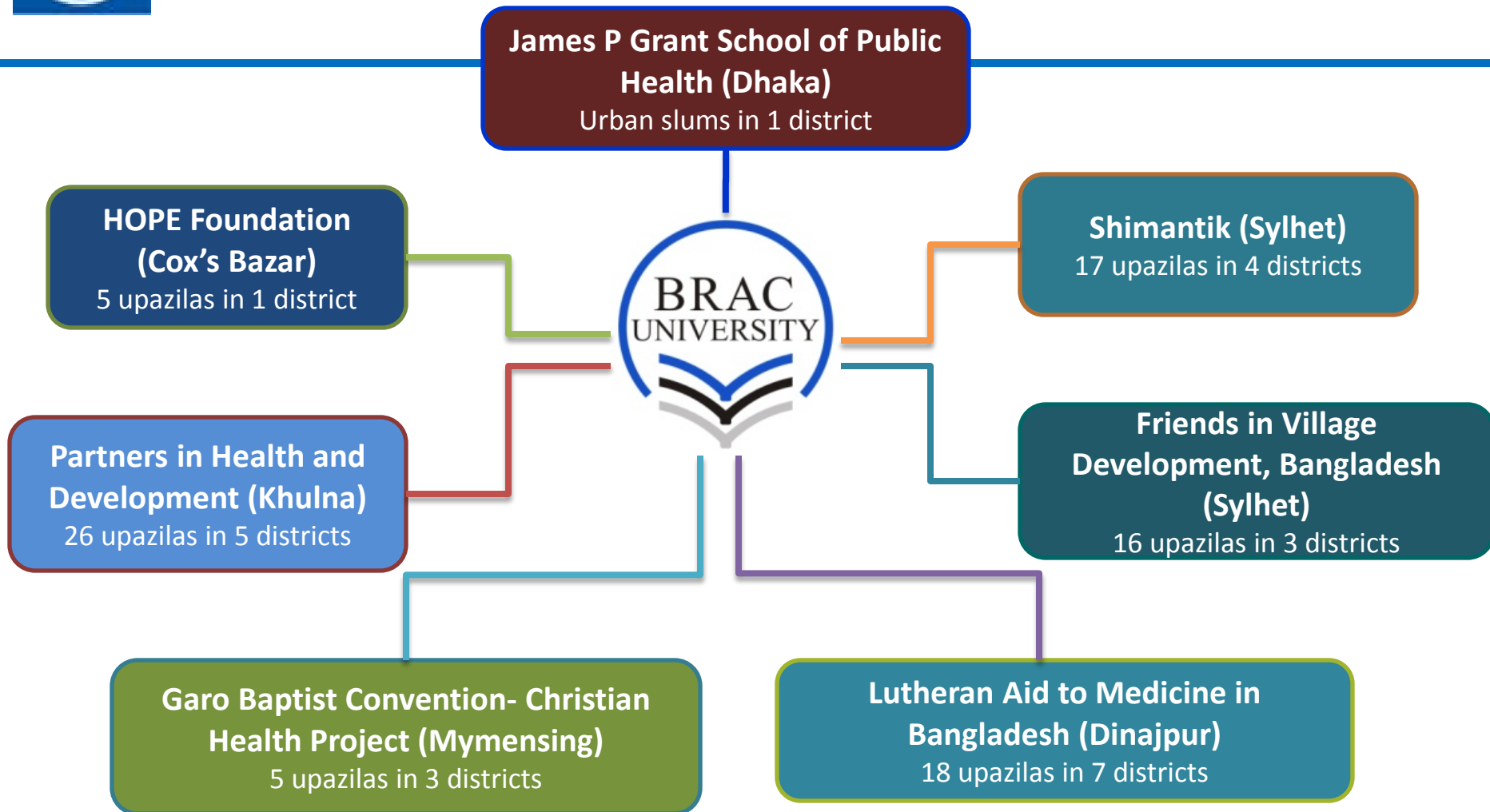
for Health Systems
Strengthening





Evaluating Innovations in Health Workforce

Hub and Spoke Model for training Community Midwives, Bangladesh

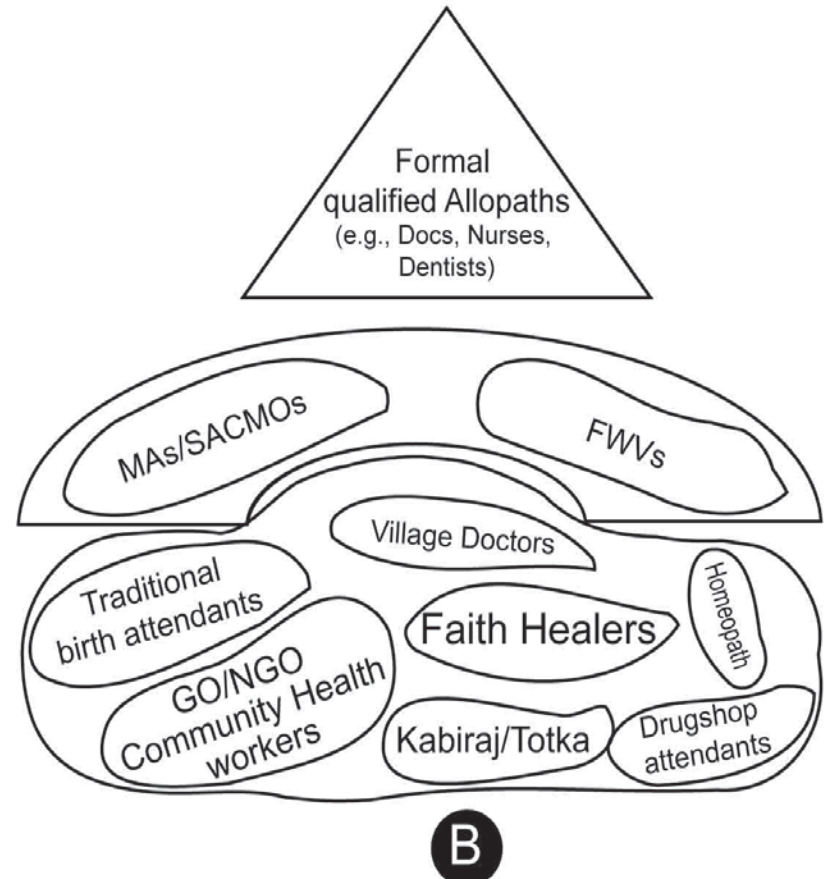
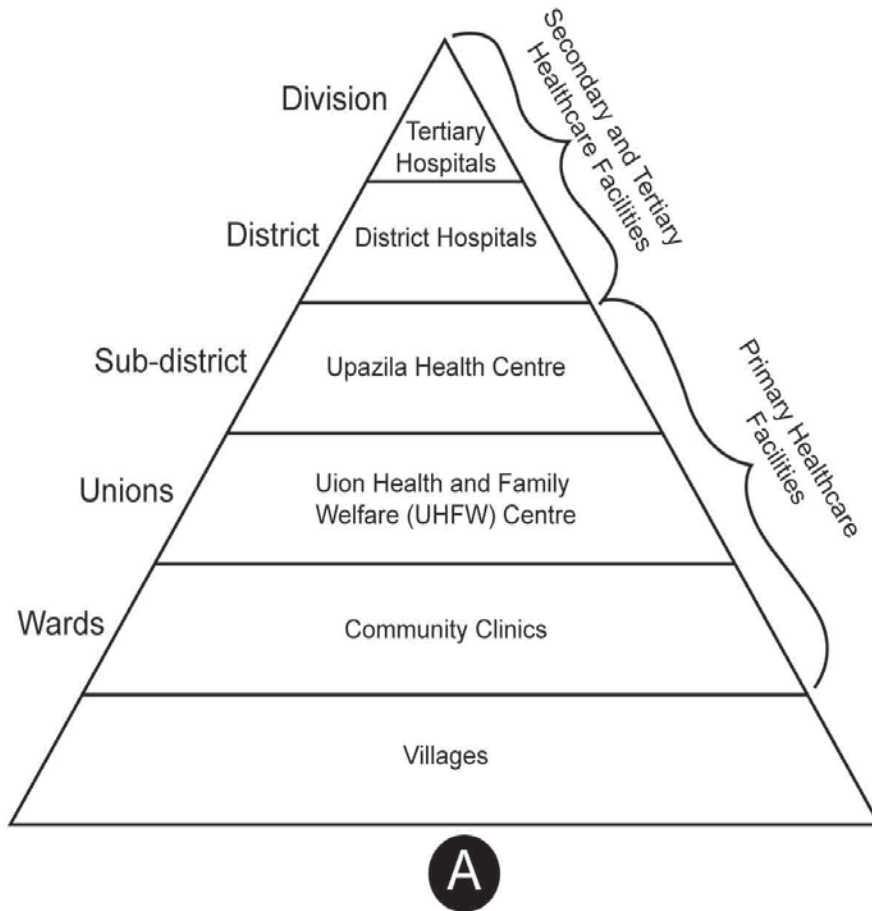




Embracing Governance Complexity:

Two views of the health system in Bangladesh

(Source: Ahmed et al. Lancet 2013)



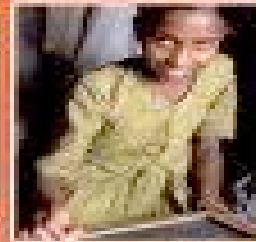


Pluralism + Polycentricism

- Embracing complex realities of governance:
 - “Beyond Markets and States: polycentric governance of complex economic systems” – Elinor Ostrom, Nobel Laureate Economics 2009
 - “Structured Pluralism” – Londono and Frenk 1997
 - “Mixed Health Systems” – Nishtar 2010, Lagomarsino et al. 2010
 - “Pluralism and Marketisation” – Standing and Bloom, 2001



Comparative analyses of success!



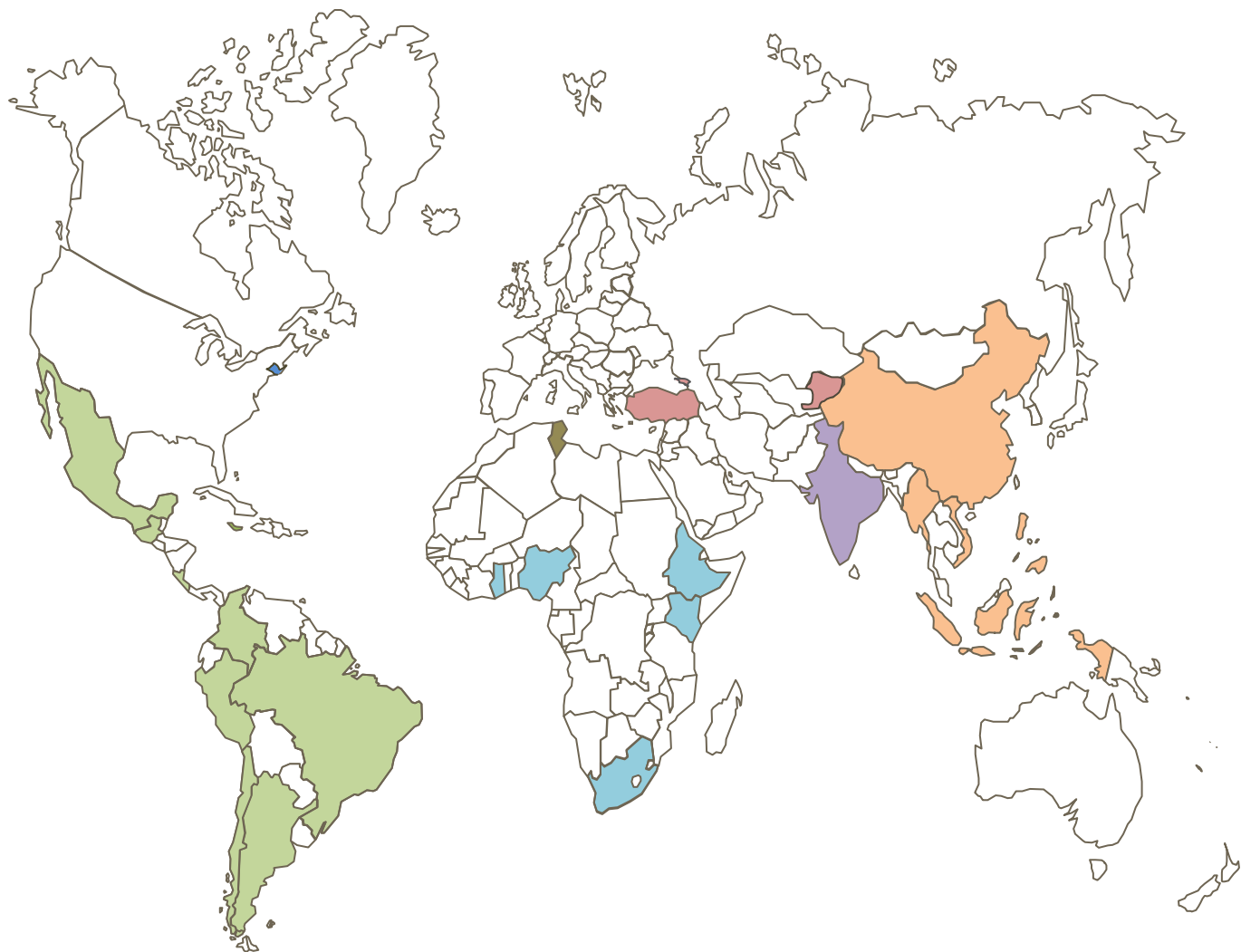
**'Good health at low cost'
25 years on**

What makes a successful health system?

Edited by Dina Balabanova - Martin McKee - Anne Mills



Cross-Country Comparative Analysis of UHC Reforms



- Argentina
- Brazil
- Chile
- China
- Colombia
- Costa Rica
- Ethiopia
- Georgia
- Ghana
- Guatemala
- India
- Indonesia
- Jamaica
- Kenya
- Kyrgyz Republic
- Mexico
- Nigeria
- Peru
- Philippines
- South Africa
- Thailand
- Tunisia
- Turkey
- USA- Massachusetts
- Vietnam



JOINT LEARNING NETWORK

For Universal Health Coverage



The JLN is a *practitioner-to-practitioner learning network* of 9 countries in Africa and Asia committed to accelerating progress of UHC reforms:



Ghana



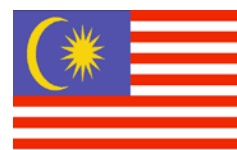
India



Indonesia



Kenya



Malaysia



Mali



Nigeria



The Philippines



Vietnam



The need for greater rigor!

- Terms and taxonomies
 - *Applied, complexity, delivery, diffusion, evaluation, formative, implementation, operations, policy, program, process, realist, services, scale-up, spread, systems, translation two or “T2”...etc. etc.*
- Methods and Measures
 - What methods are the best “fit for purpose”?
 - How to measure health systems strengthening?
 - What is the best measure of universal coverage?
 - Criteria to assess strength of evidence?



Exploiting hybrid vigor!

Diverse constituencies converging on “delivery” science

- Policy and system designers
 - financing, governance, workforce etc.
- Scaling-up intervention implementers
 - HIV, TB, Malaria, NTDs, NCDs, Immunization, etc.
- Monitoring and evaluators
 - inputs, outputs, impacts
- Knowledge Translators
 - why isn't evidence being applied?



Third Global Symposium on Health Systems Research

Science and practice of people-centred health systems
Cape Town · 30 September – 3 October 2014

- The 2014 biennial gathering of Health Systems Global will address:
 - how to make health systems more responsive to the needs of individuals, families and communities
- *Co-sponsored by* WHO/Alliance for Health Policy and Systems Research and a local organizing consortium: University of Cape Town, University of the Western Cape, Health Systems Trust, Stellenbosch University, SA Medical Research Council
- *Supported by* the Department of Health of South Africa
- 1500 participants expected from **>100 countries**
- Researchers, policy-makers, funders, implementers and other stakeholders
- *All details at:* <http://hsr2014.healthsystemsresearch.org>



Toward Universal Health Coverage by 2030





Thank You

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