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**STEFAN ELBE
ANNE ROEMER-MAHLER
CHRISTOPHER LONG**

**Pharmaceuticals and Security:
The Role of Public-Private Collaborations
in Strengthening Global Health Security**

Health security



Protecting populations against cross-border health threats

- Bioterrorism
- Pandemic influenza
- Highly infectious diseases prevalent in LMICs (HIV, Tuberculosis, hemorrhagic fever, etc.)

Pharmaceutical industry



Key role to ensure that therapies

- Are developed
- Are produced in sufficient quantities/good quality
- Available at the right time/in the right places

Policy problem: low effective market demand



Small/unpredictable markets:

- Uncertain future needs
- Low prices
- High opportunity costs

Policy solution: public-private collaborations

Bioterrorism

- Need for the development of medical countermeasures leads to governmental institutions that seek industry collaboration

Pandemic influenza

- Existing product suddenly in demand for national stockpiling
- Problem of production capacity

Infectious diseases in LMICs

- Global initiatives with important role played by a few philanthropic organizations
- Both procurement and development issues

Research questions



- how are governments trying to incentivize pharmaceutical companies to become more active partners in strengthening health security?
- have (some) pharmaceutical companies adapted their business strategies to respond to the health security?
- how is the tension between ‘industry-as-a-partner’ and ‘industry-as-lobbyist’ managed in public-private collaborations for health security?

Case study: tuberculosis



TB as a health security threat

- Health burden
- Economic burden
- Link to other health security threats (AIDS; antimicrobial resistance; counterfeit drugs)

Policy response: increase the availability of TB drugs

Low market demand



First-line TB drugs: USD 261-418 million

Second-line: approximately USD 300 million

- TB a disease of the poor
- Low levels of diagnosis
- MDR/XDR patients require different combination regimens

Public-private collaborations for TB medicines



TB Alliance:

Abbott, AstraZeneca, Bayer, Gilead, GSK, J&J, Lupin, moksha8, Novartis, Sanofi

Aeras:

CanSino, China National Biotech Group, Crucell, Emergent BioSolutions, Immune Solutions, ImmunoBiology, Intercell, Okairos, Otsuka, Sanofi Pasteur, Serum Institute, Statens, Wuhan Institute of Biological Product

Involvement of companies from MICs



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Why focus on companies from MICs? (1)



- Research focus hitherto on HIC companies
- China and India are among the highest burden countries ($\approx 40\%$ of global burden)
- China and India have two of the fastest growing pharmaceutical industries
- Gvts seem to prefer buying from domestic producers
- Chinese and Indian companies are among the key producers of TB drugs already

Why focus on companies from MICs? (2)



They may have greater interest in small markets

- Lower production costs → higher profit margins
- Lower opportunity costs b/c of limited access to more profitable markets
- Many are not publicly traded and hence less pressured to fulfill shareholder expectations of fast returns on investment

(Very) Preliminary Findings



Companies' motivations:

Companies' motivations to engage in collaborations:

- Access to expertise and technology
- Expanding an already existing market
- Access to public funds

Incentives:

Different incentives to engage pharmaceutical companies from HICs and LMICs?

- Some incentives that work in HIC may not work in LMICs (others may though)
- Problems in LMIC companies' market environment may be leveraged as incentives for collaboration (e.g. access to technology)

Thank you!



A.ROEMER-MAHLER@SUSSEX.AC.UK