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Febrile Illness Evaluation in a Broad Range of Endemicities

Understanding the Social Context of Antibiotic Prescribing and Use in Zimbabwe

The FIEBRE Social Science Study

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UKaid from the British people

BRTI Biomedical Research and Training Institute

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

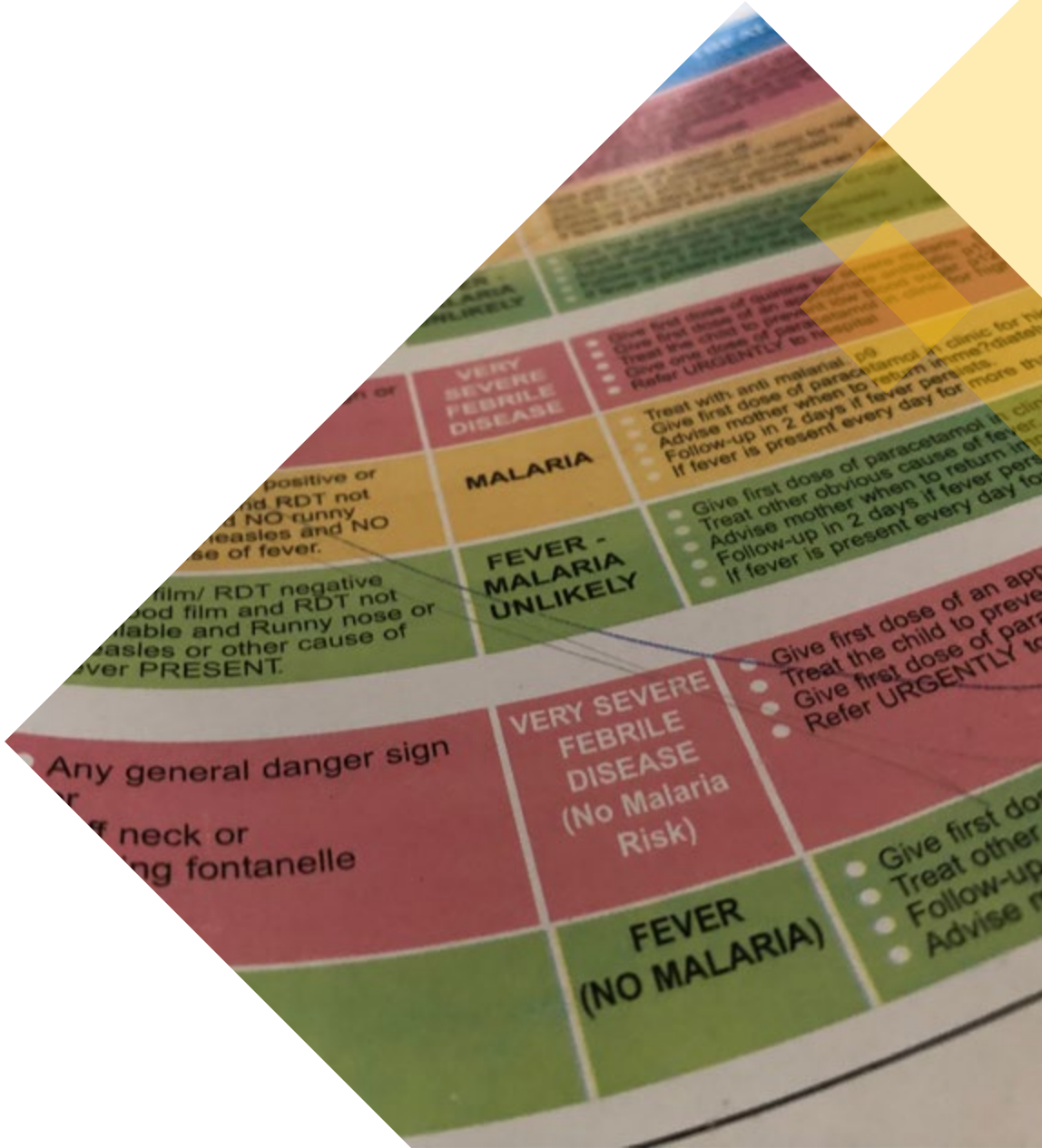
Background

- FIEBRE
  - Seeks to identify the causes of fever
  - Aims to improve clinical guidelines treating fevers
  - A key focus is ‘optimizing’ antibiotic use

- FIEBRE **social science**
  - Seeks to understand how and why people actually use antibiotics in different settings
  - We cannot improve guidelines and regulations for antibiotic use unless we understand the social contexts that shape how people seek and deliver care

Research questions

- How are antibiotics used in Harare health facilities?
- For what reasons are antibiotics prescribed beyond clinical guidelines (e.g. EDLIZ, IMCI)?
- How are antibiotics being used beyond healthcare settings?
- How could antibiotic use be reduced without negatively affecting livelihoods and care?



Methods

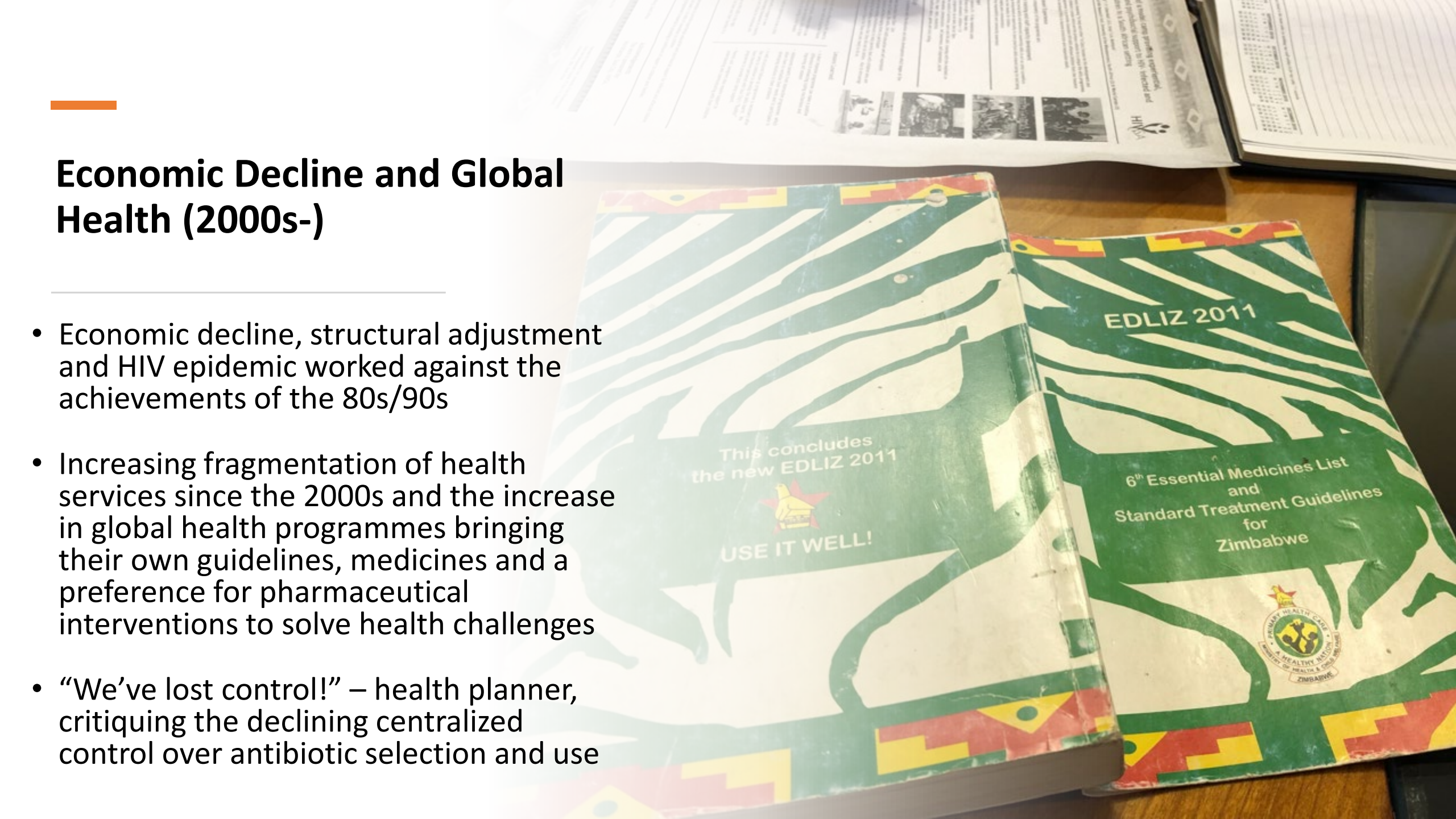
- Between June 2018 – Dec 2019, we conducted:
  - Stakeholder interviews with policymakers, health planners, guideline developers, scientists, senior clinicians (n=20)
  - Observed outpatient consultations in clinics in Mbare (370) and Budiriro (371) and Harare Central Hospital
  - Interviewed nurses, doctors, pharmacists and facility managers (n = 29)
  - Household surveys in Mbare and Budiriro (n = 100)
  - Ethnographic fieldwork with residents, market vendors and sex workers (n = 30)

Rational Drug Use (RDU) in Zimbabwe

- Zimbabwe a success story in adopting RDU as part of its essential drugs programme
- First EDLIZ in 1987 – both drug list and national treatment guideline
- Emphasis on management and appropriate use of drugs, patient safety and cost effectiveness
- Regular surveys to track progress
- Highly optimistic in the 1990s: “Visit any government facility and find a well-thumbed copy of EDLIZ”
- Zimbabwe “provides valuable insight for other countries wishing to promote RDU”

Economic Decline and Global Health (2000s-)

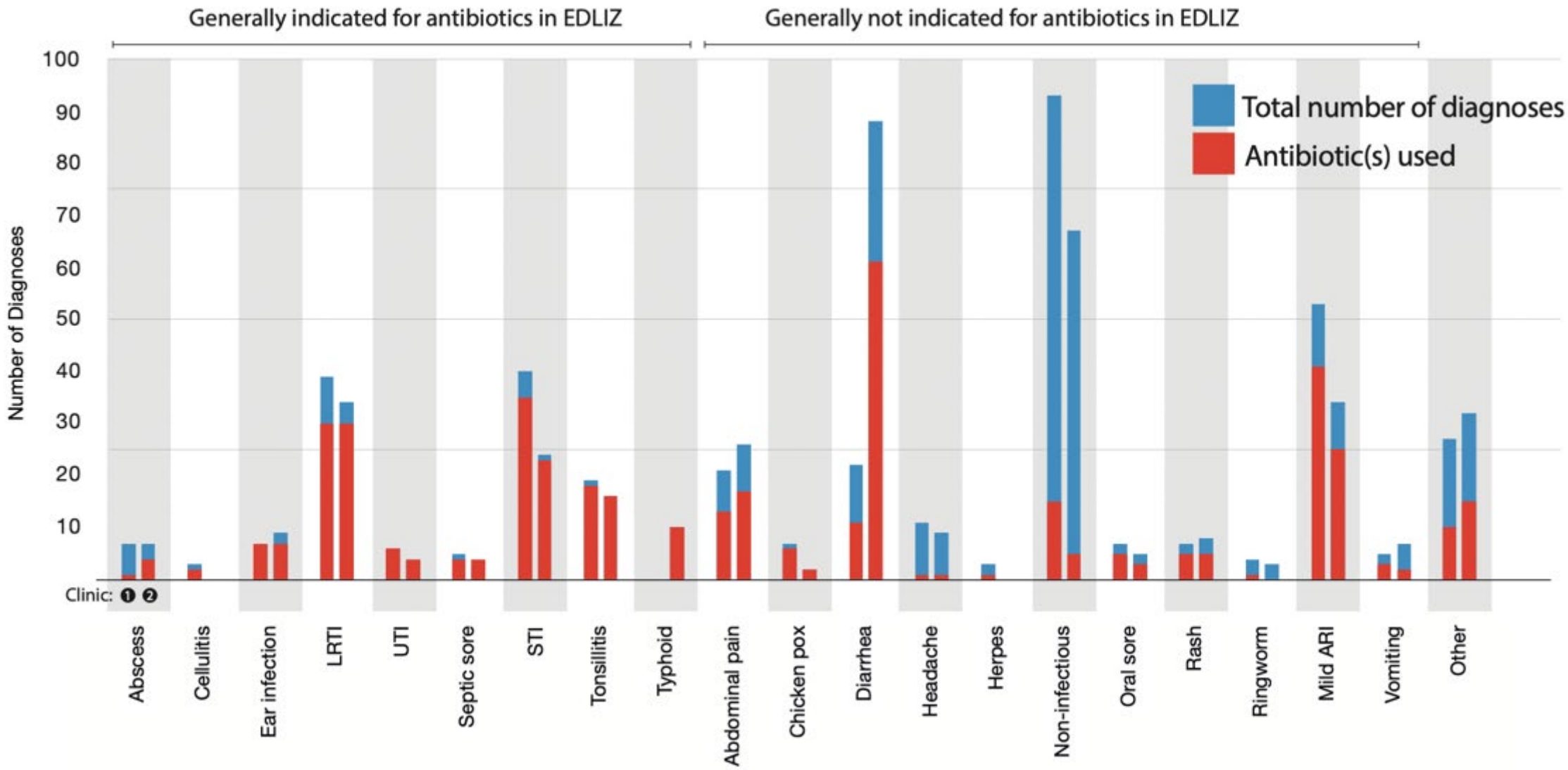
- Economic decline, structural adjustment and HIV epidemic worked against the achievements of the 80s/90s
- Increasing fragmentation of health services since the 2000s and the increase in global health programmes bringing their own guidelines, medicines and a preference for pharmaceutical interventions to solve health challenges
- “We’ve lost control!” – health planner, critiquing the declining centralized control over antibiotic selection and use



Social Context of Prescribing Today

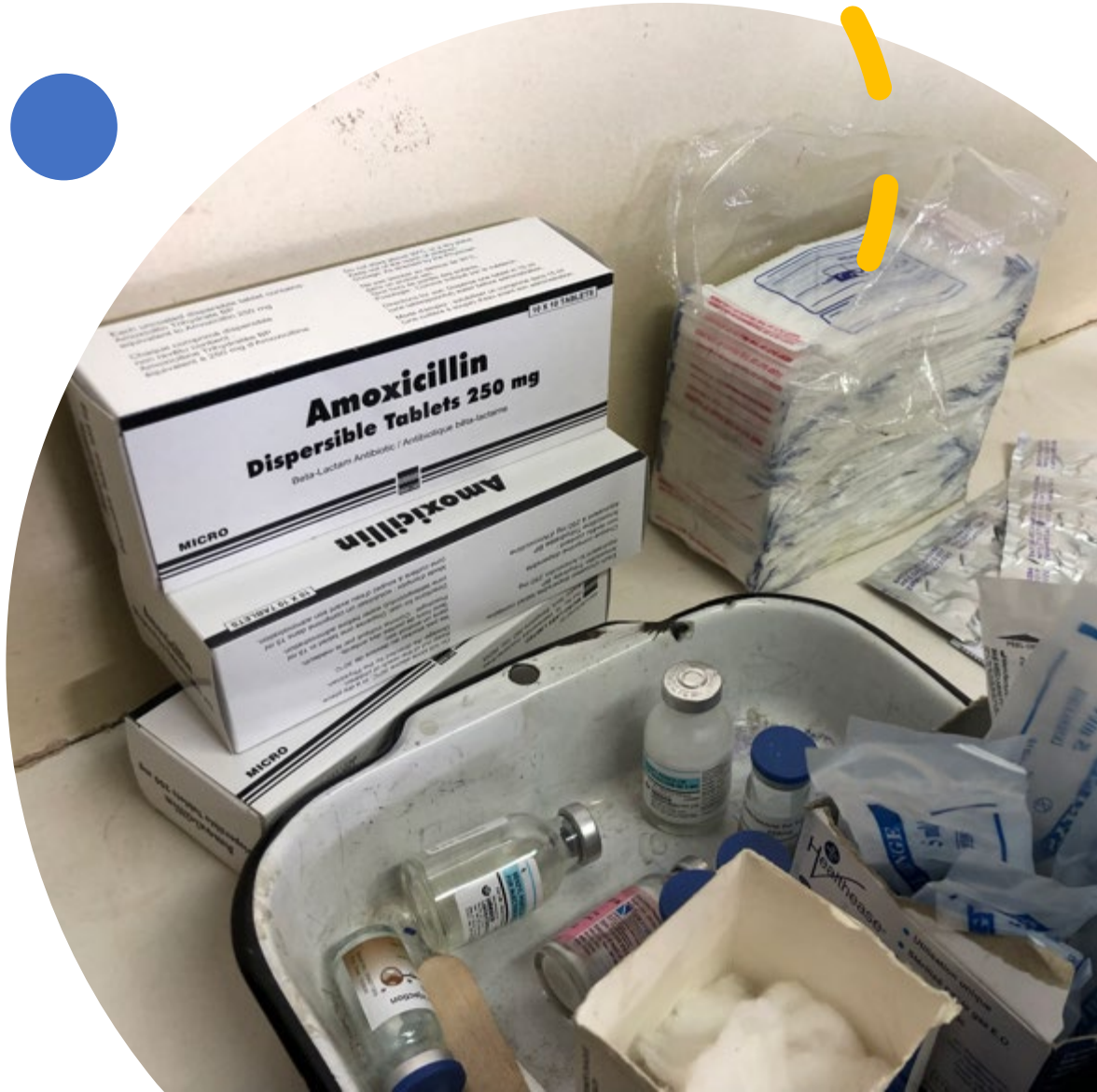
- Shortages of time, diagnostics, drugs, and regular health system collapses
- Impoverished patient population with high rates of infectious disease (e.g. HIV, typhoid, cholera)
- Among doctors and nurses, a keen knowledge of antibiotic indications and commitment to RDU – EDLIZ as the “medical bible” – reflecting Zimbabwe’s strong medical education system
- But antibiotics still often prescribed beyond the EDLIZ guideline

Antibiotic prescription broken down by diagnosis (n=741 Consultations)



Reasons for Prescription Beyond Guidelines:

1. Not enough time and resources to do all investigations
2. Worry that the patient might come back with an even more serious condition
3. Knowledge of patients' socio-economic situation
4. Patient/parent expecting an antibiotic (and reporting symptoms strategically to get one)
5. Guidelines bypassed by mandates from local health authorities



The Roles of Antibiotics Under Resource Constraints

- Antibiotics not only kill bacteria; they also:
  - Help clinicians to manage uncertainty
  - Show that they care when there is little time / resources
  - Fulfil expectations for medicines
- Antibiotic use beyond EDLIZ is thus closely related to resource constraints, economic hardship and the reduction of care to medicines

Centrality of the clinic queried

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" Right now , clinics and hospitals have really let us down. Our money is only used to get the card stamped"

Budiriro Resident

Oct 2018

"Ahh the clinic these days is for paracetamol only"
Budiriro resident Oct 2018

"What is the clinic for?
The clinic has no medicine they give you a prescription, You just go there to throw away your five dollars, to get a paper so that you go to the pharmacy. At times you feel like telling them give me back my five dollars"

Disgruntled woman-Mbare

July 2018

Care beyond clinical settings

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"I avoid the clinic because you waste a lot of time in a queue. All they do when you finally see a nurse is write down some medicine and send you to the pharmacy . Now I know amoxicillin is for tonsils . Each time I have tonsils I know what to use. I don't go to the pharmacy. The pharmacy will not give me amoxicillin if my clinic book does not say get amoxicillin . I go straight to the market. Pills at the market are cheaper. I know where I can get a packet of 10 Amoxicillin for 50cents , $1 for 20. So instead of going in circles I save time and money ,imagine losing $5 just to get your book stamped. "

- ***Mbare resident*** **July 2018**

Care beyond clinical settings

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"Most people just come straight to my house, the pharmacies are expensive, they bring the card from the clinic, I read the card and I give them their medicine. "

Drug vendor from a high density suburb
May 2019

"I get metro for stomach problems from a woman who stays at that flat (pointing to a flat nearby), I buy 20 tablets for a dollar, its cheaper than the pharmacy and I avoid going through a long clinic queue"

Mbare resident
June 2018

A sense of inadequacy

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"Medicine is for those with USD ONLY if you don't have USD you die"
Budiriro resident
Oct 2018

"The pharmacy has no problem all the medicine is available there, ***the problem is me*** *who does not have the money, the pharmacy will be full but nothing there is for free.* ***No money- no medicine****. If you can't pay you walk out. You end up getting cheaper medicine from people who sell in their homes."*

Budiriro resident

Oct 2018

Access to medicine for FSWs

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- FSW had better access to medicine- National Sex Work Programme (MoHCC, NAC and CeSHHAR)
- “Sisters with a Voice" program
- “Sisters” with medical care

“Most of my girls do not keep STIs in hiding. If I see that one of them is not well, I will offer to take them to CeSHHAR for treatment.

Mai Fau (pseudonym) Nov 2019

“CeSHHAR was made for us, they saw that in our job, people were suffering, we had no money for medicine, and the nurses at the clinics were treating us like we were not human, so CeSHHAR provides us with medicine and care for free.

(FSW4) Nov 2019

Beyond Individual behaviour

- In global discussions around AMR and stewardship, much focus is on the protection of antibiotics via reducing 'irrational' behaviour
- However our findings, like other studies in LMICs, suggest that overuse of antibiotics is driven by structural and systemic factors
- This means that education / awareness interventions alone may have limited benefit for bringing about safe, sustainable reductions in antibiotic use

Image from Denyer-Willis & Chandler 2019. "Quick fix for care, productivity, hygiene and inequality". *BMJ Global Health*. 4(4): e001590

How can antibiotic use be reduced?

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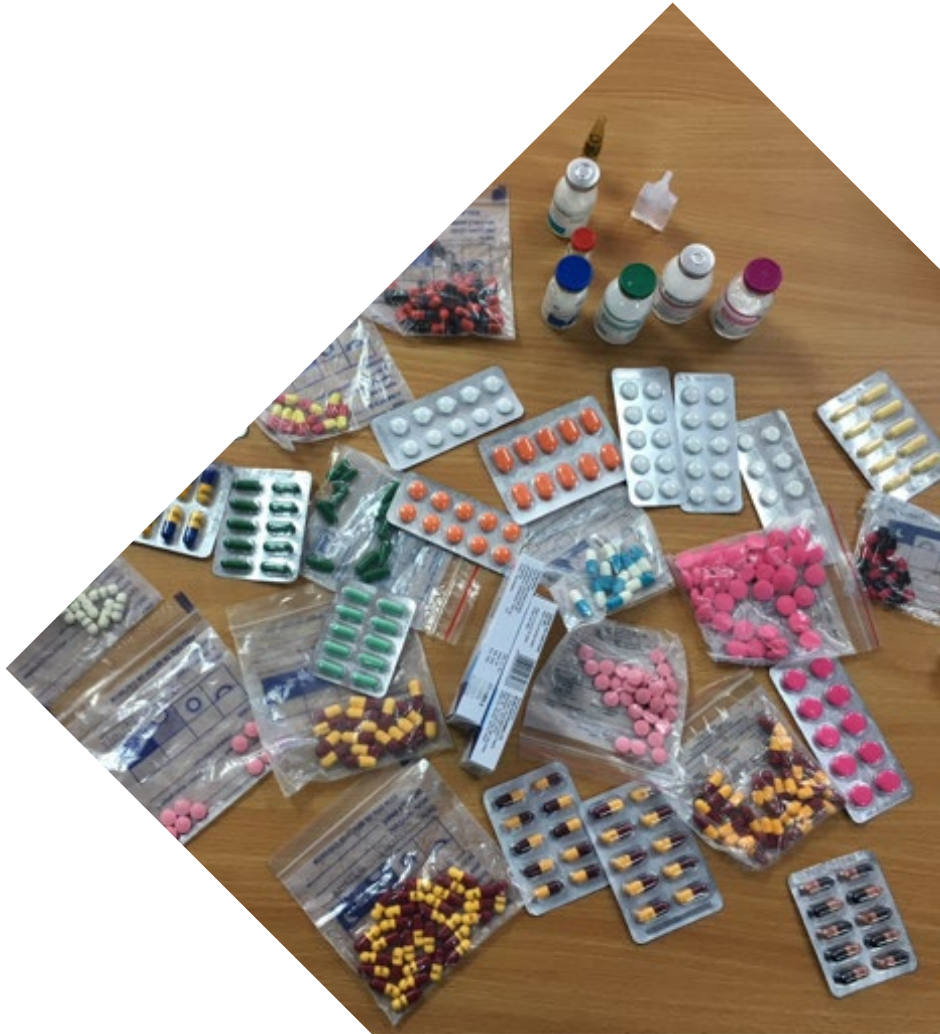
- To reduce antibiotic use, we must address the systemic gaps antibiotics have come to fill
- This means creating prescribing environments in which clinicians can provide ‘good care’ without necessarily using antibiotics (e.g. longer consultations, improved guidelines, better diagnostics)
- It also means making broader improvements to health systems, poverty reduction and reducing the burden of infections (e.g. water and sanitation infrastructure)



Next steps…

- The FIEBRE clinical study will provide data that will help to improve clinical guidelines
- Social science data will be combined with clinical data to ensure that such guidelines are sensitive to the social context of implementation
- We will also continue to work with key stakeholders in Zimbabwe to maximise the relevance and impact of our social science research

Thank you!

For more info see: https://www.lshtm.ac.uk/research/centres-projects-groups/fiebre

FIEBRE Social Science Publications:

Dixon J., Chandler C.I.R. (2019). Opening up 'fever', closing down medicines: algorithms as blueprints for global health in an era of antimicrobial resistance. Medicine Anthropology Theory, 6(4), 53-79. http://medanthrotheory.org/index.php/mat/article/view/4972

Dixon, J., E. MacPherson, S Manyau et al. (2019). The 'Drug Bag' method: lessons from anthropological studies of antibiotic use in Africa and South-East Asia. Global Health Action 12, (sup1). https://www.tandfonline.com/doi/citedby/10.1080/16549716.2019.1639388?scroll=top&needAccess=true