

The Entrenched Problem of Antibiotic Overuse: A quick fix for care, productivity, hygiene and inequality

Laurie Denyer Willis

Research Fellow Medical Anthropology
London School of Hygiene and Tropical Medicine

LONDON
SCHOOL of
HYGIENE
& TROPICAL
MEDICINE



@AnthroAMR



ANTIMICROBIAL
RESISTANCE
CENTRE

*Inspiring innovation in AMR research through
interdisciplinary and international engagements*

Modernity and antibiotics

Our research across countries in Africa and Asia suggests antibiotics have become answers to modernity, and have become a part of the modernity project themselves – they are part of modern infrastructure.

We might think about this as antibiotics becoming a *quick fix* –

- Quick fix for care
- Quick fix for productivity
- Quick fix for hygiene
- Quick fix for inequality

The 'Quick Fix'



Antibiotics: a quick fix for care



Antibiotics: a quick fix for care



Antibiotics: a quick fix for care

Health care has come to take the form of medicines

Not only in clinics but in the ways we provide, count and design global health.

Without medicines, what is left of global health?

Image from USAID Impact Blog <https://blog.usaid.gov/category/health/page/3/>

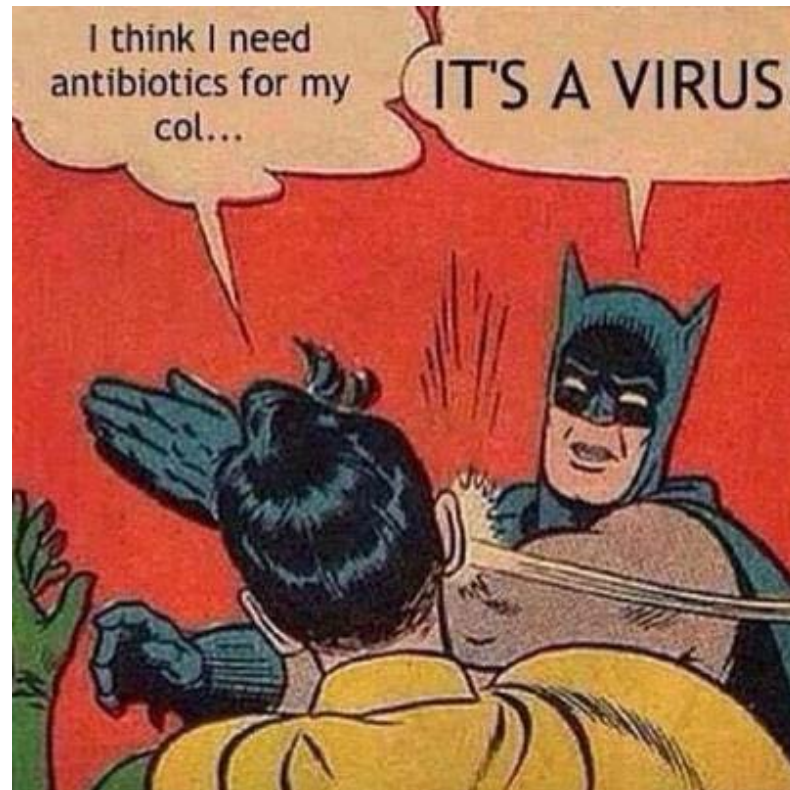


Image from Coca-Cola's Project Last Mile
<http://www.coca-cola.co.uk/stories/a-helping-hand-on-the-home-stretch-Project-Last-Mile-makes-sure-remote-corners-of-Africa-can-access-vital-medicines>

Antibiotics: a quick fix for care

We often say patients are demanding antibiotics. But are they demanding *care* in a system that has conflated medicines with care?

What does health care without antibiotics look like?



Antibiotics: a quick fix for productivity

- Antibiotics allow us to return to work faster
- In scenarios of day-wage /fee-for-service labour, antibiotics allow people to keep going



Antibiotics: a quick fix for productivity

Threat to economies = productivity

Estimates of consequences of AMR on GDP

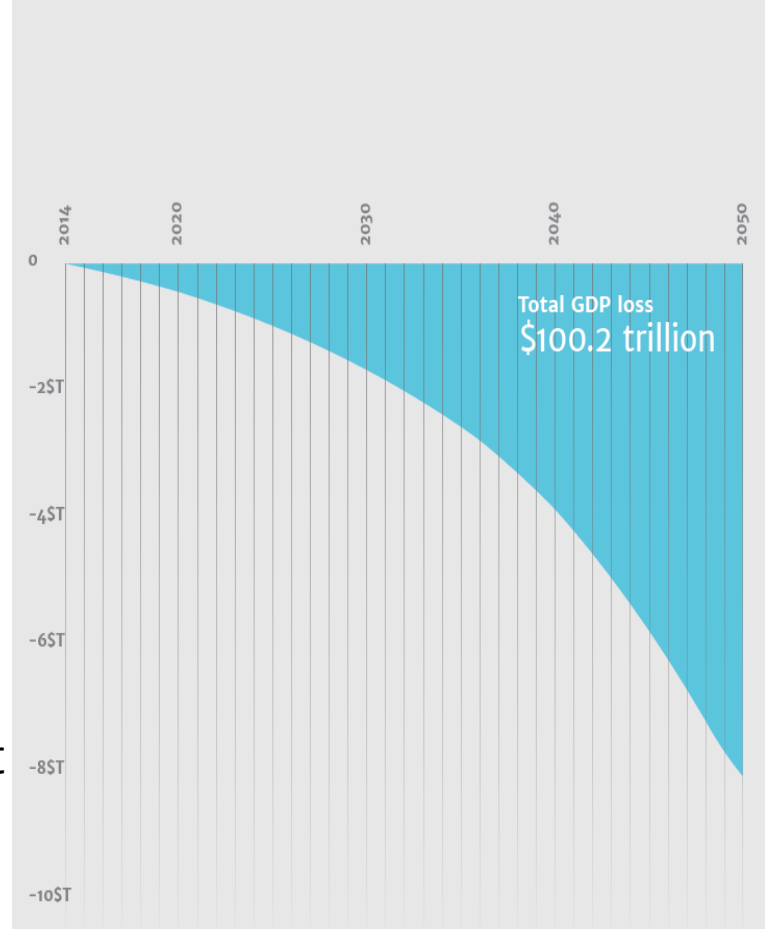
CDC 2011: AMR in USA costs '\$35bn in societal costs' (after \$20bn excess healthcare costs)

Smith & Coast 2012: AMR costs underestimated – need to consider lost productivity, increased absenteeism

RAND 2014: basis of estimated effects of AMR on the economy – 'disruption of the supply of labour': over 40 years world GDP loss of \$53bn-\$3trn

World Bank: 'in particular the loss of output caused by a reduced effective labor supply (due to lower productivity and deaths of workers)'. "Drug resistant infections could cause global economic damage on par with

AMR's impact on World GDP
in trillions of USD



O'Neill report 2014

Antibiotics: a quick fix for productivity



Animals – as well as humans – are a unit of productivity enabled by antibiotics



Increase Calf Growth Rate!

AUREOMYCIN

Rapid Development, Little or No Scours, Improved Health

Reported When Rations Are Fed that Contain This Golden Antibiotic

An astounding step-up in feed utilization by calves, based on use of AUREOMYCIN in manufactured feeds, is now under way. Present evidence points to spectacular increases in rate of growth, marked reductions in calf losses from intestinal troubles and pronounced improvement in general health and appearance, when rations include aureomycin.

Nutritional studies that included field tests under farm conditions have been made by Agricultural Experiment Stations. These involved both pure aureomycin and Vitamin B₁₂ and Antibiotic (Aureomycin) Feed Supplement. It was found that diets that contained aureomycin produced increases of 10, 20 and 30 per cent (in certain instances, considerably higher percentages) in rate of calf growth. Little or no scouring was encountered and improvement in general well-being of tested calves over control groups was marked.

Several studies that were continued well into the period of active rumination revealed no interference with rumen

function nor any harmful effects, even when levels of aureomycin were fed at levels many times higher than is commercially practical.

Availability of aureomycin in manufactured calf starters, feeds and supplements offers dairy farmers, stockmen and breeders not only an opportunity to mature their calves faster and more economically, but also to cut down or escape the crippling calf losses from intestinal troubles that have been sapping the nation's calf crops for many years.

Aureomycin has been proved highly effective for swine, chickens, turkeys, calves and several kinds of small animals and is today the antibiotic most widely used in the feed field. Ask for a feed that contains aureomycin!

Animal Feed Department
LEDERLE LABORATORIES DIVISION
a division of **AMERICAN CHEMICAL COMPANY**

30 Rockefeller Plaza

New York 20, N. Y.

Antibiotics: a quick fix for productivity



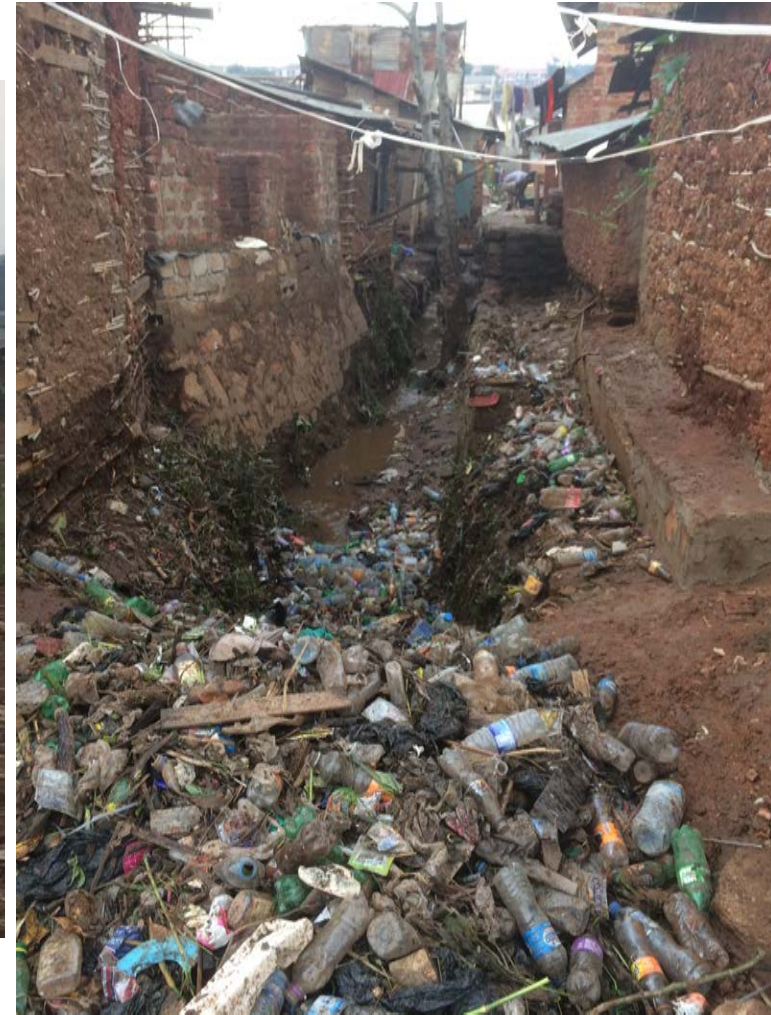
Antibiotics: a quick fix for hygiene



WHO 2018 Views of HCPs in LMICs

- *'How can you practice sterile techniques and good hygiene practices when you have patients lying on the floor?' Gynaecologist – Philippines*
- *'So what happens (is) that these bronchoscopes and these endoscopes they are not allowed sufficient time for disinfection, so there is high chance of cross transmission from one patient to another because bronchoscopy is often done for TB patients and non-TB patients as well.' ID doctor – West Bengal*
- *'Overcrowding which leads to cross contamination and cross infection... there is no proper isolation of infectious diseases... there are no proper isolation rooms with ventilation and air.' Paediatric doctor – Ethiopia*

Antibiotics: a quick fix for hygiene



Antibiotics: a quick fix for inequality



The 'Quick Fix'



Does AMR spell the End of Modern Medicine?

Often our fight *against* AMR is a fight *for* modernity

Failure of antibiotics – AMR – is an opportunity to render visible the ways we have become entangled with these medicines

If we can address the problems to which antibiotics have become solutions – e.g. care, productivity, hygiene, inequality – can we move into a post-modern era of medicine less defined by these anti-biotic drugs?



Acknowledgements

Anthropology of AMR Colleagues

Clare Chandler

Coll de Lima Hutchison

Justin Dixon

Eleanor MacPherson

Komatra Chuengsatiansup

Luechai Sringernyuang

Sittichoke Chawraingern

Thitima Urapeepathanapong

Panoopat Poompruek

Phaka Whanpuch

Susan Nayiga

Christine Nabirye

Miriam Kayendeke

PhD students

Salome Manyau (Zimbabwe)

Yuzana Khine Zaw (Myanmar)

Esther Rottenburg (UK/Uganda)

Alice Tompson (UK)

Maddy Pearson (UK/Thailand)





AMIS

FRESH APPROACHES *to the* STUDY of
ANTIMICROBIALS *in* SOCIETY

www.antimicrobialsinsociety.org



Thank you

Follow @AnthroAMR

Laurie.denyerwillis@lshtm.ac.uk

LONDON
SCHOOL of
HYGIENE
& TROPICAL
MEDICINE



amr.lshtm.ac.uk
[@LSHTM_AMR](https://twitter.com/LSHTM_AMR)



ANTIMICROBIAL
RESISTANCE
CENTRE

*Inspiring innovation in AMR research through
interdisciplinary and international engagements*