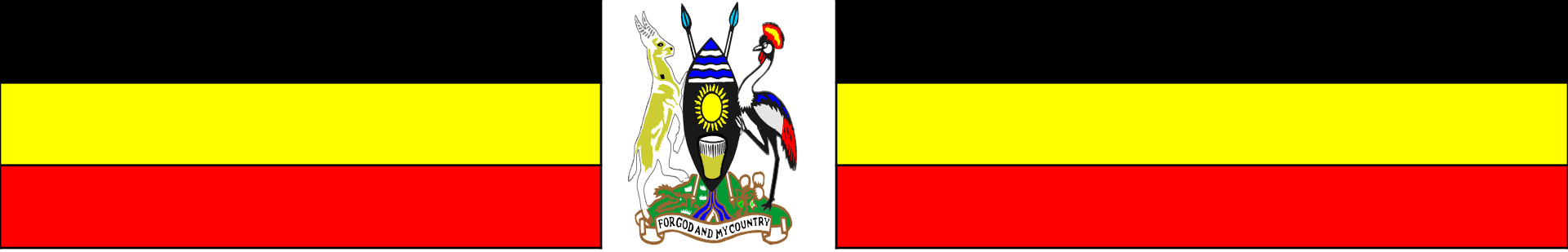
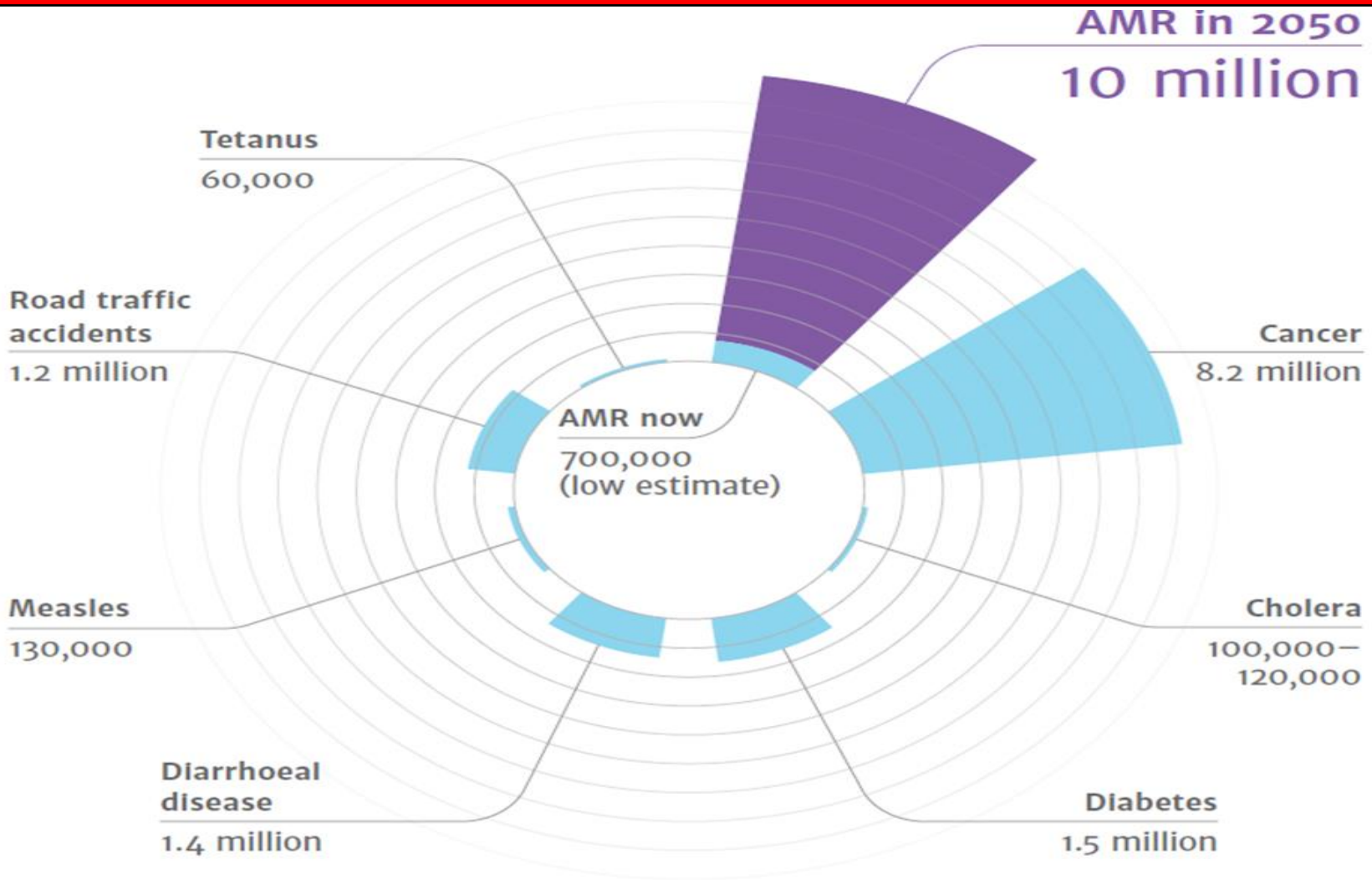


AMR: A Global Context

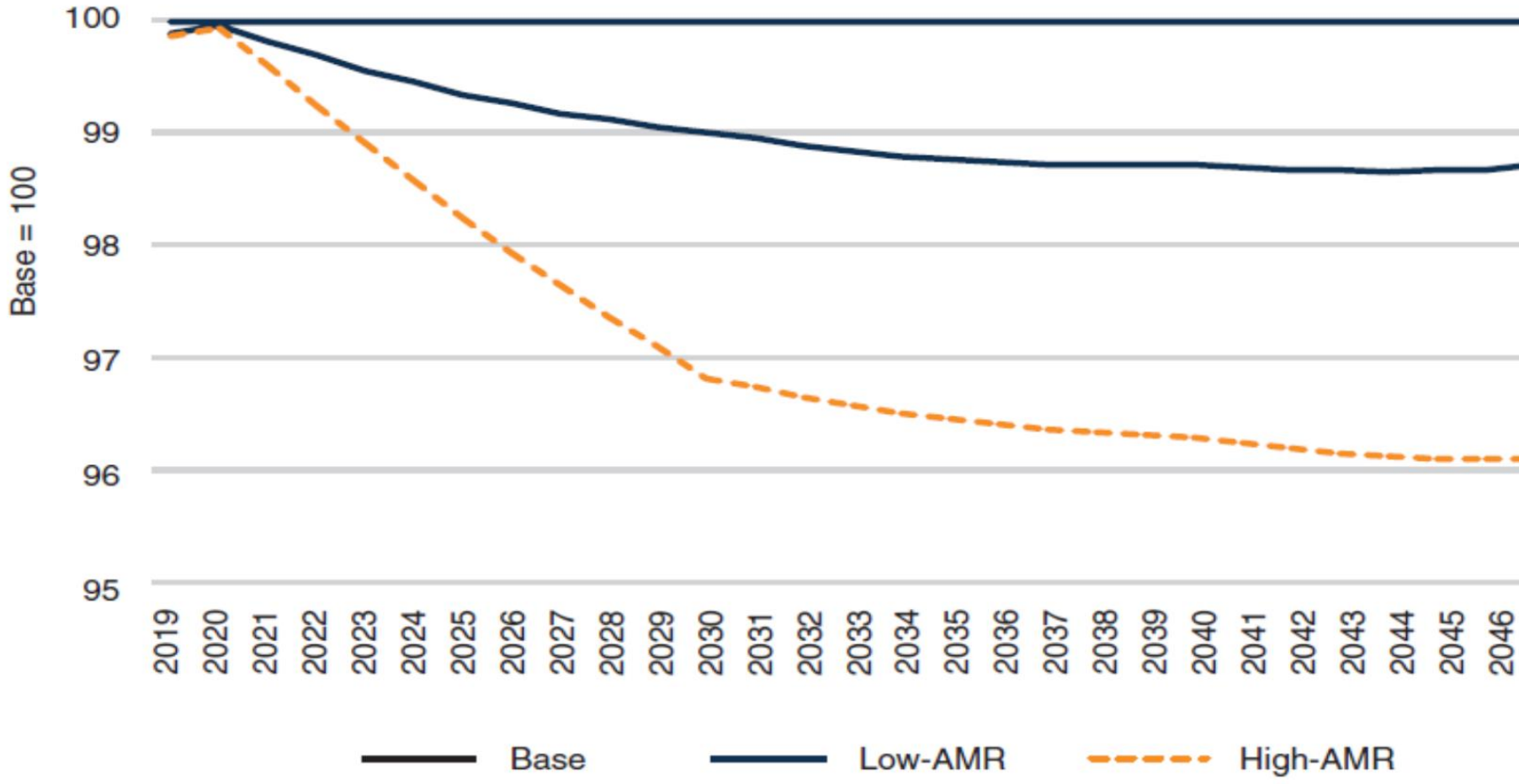
Henry Kajumbula

- Makerere University
- Uganda National AMR Surveillance Taskforce

Antimicrobial Resistance: a Major Public Health Threat

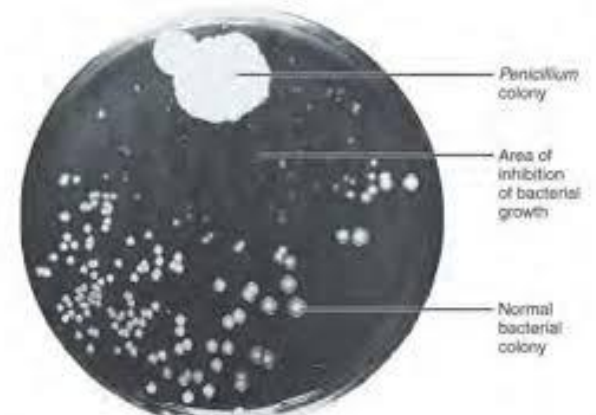


AMR Threat to People's Livelihoods



24 Million People could be forced in extreme Poverty by 2030[3]

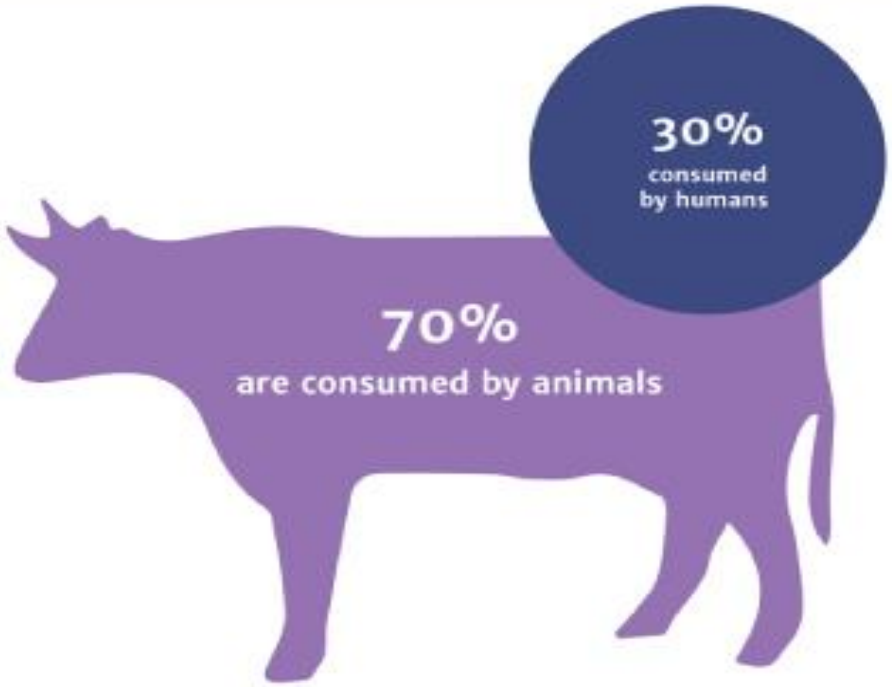
Antibiotics in the 1940s: A new Era in Medical Practice



Antibiotics in the 1940s: A new Era in Medical Practice

Antibiotics, a lifeline for various life threatening conditions since the 1940s

Antibiotics gained importance in animal Production in the 1950s



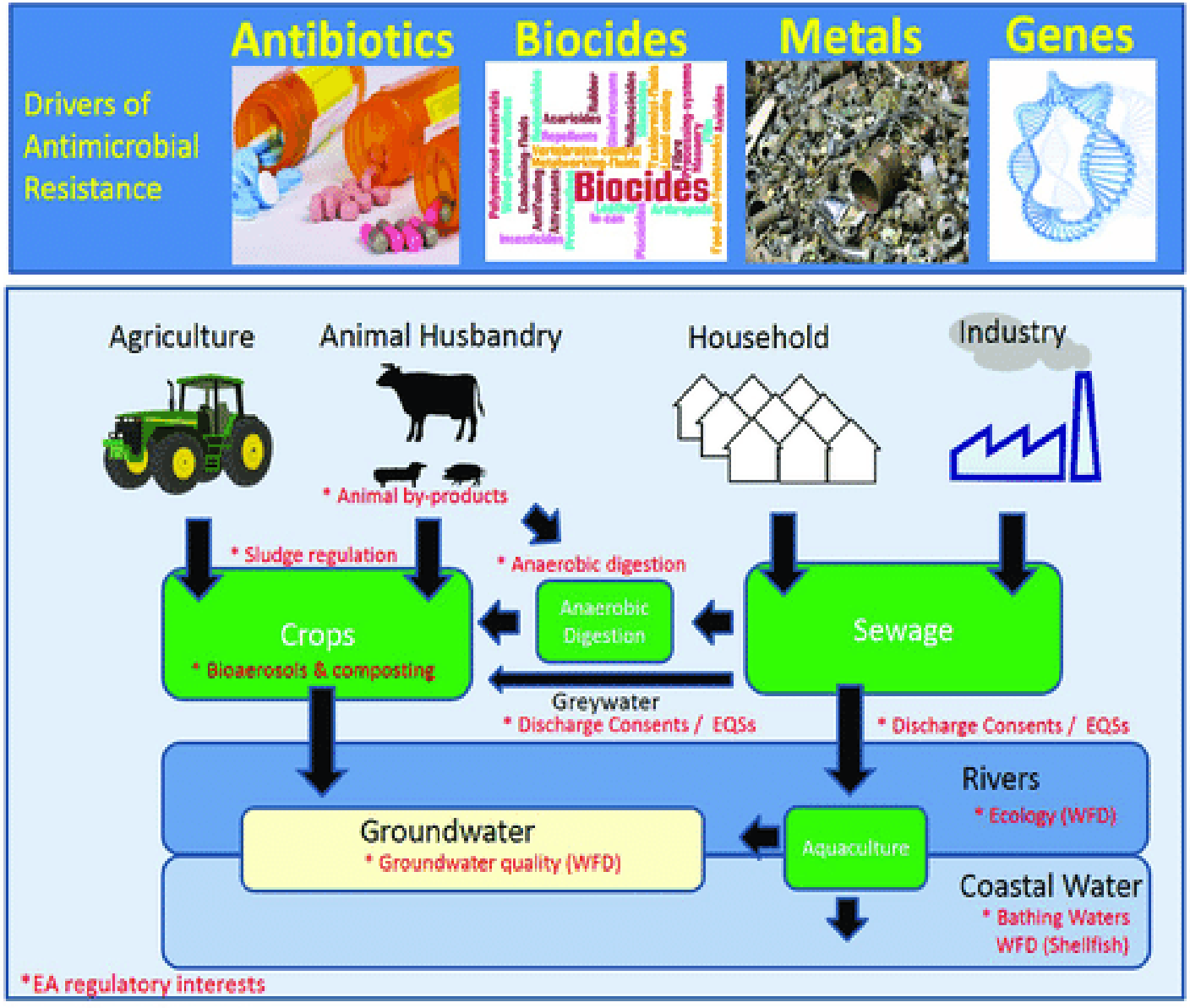
Source: Animal consumption figure of 8,893,103kg from FDA, 2012. Human consumption of 3,379,226kg in 2012 based on calculations by IMS Health. The figures are rounded from 72.5% used in animals and 27.5% used in humans.

Review on Antimicrobial Resistance

Problem of Resistance was predicted way back

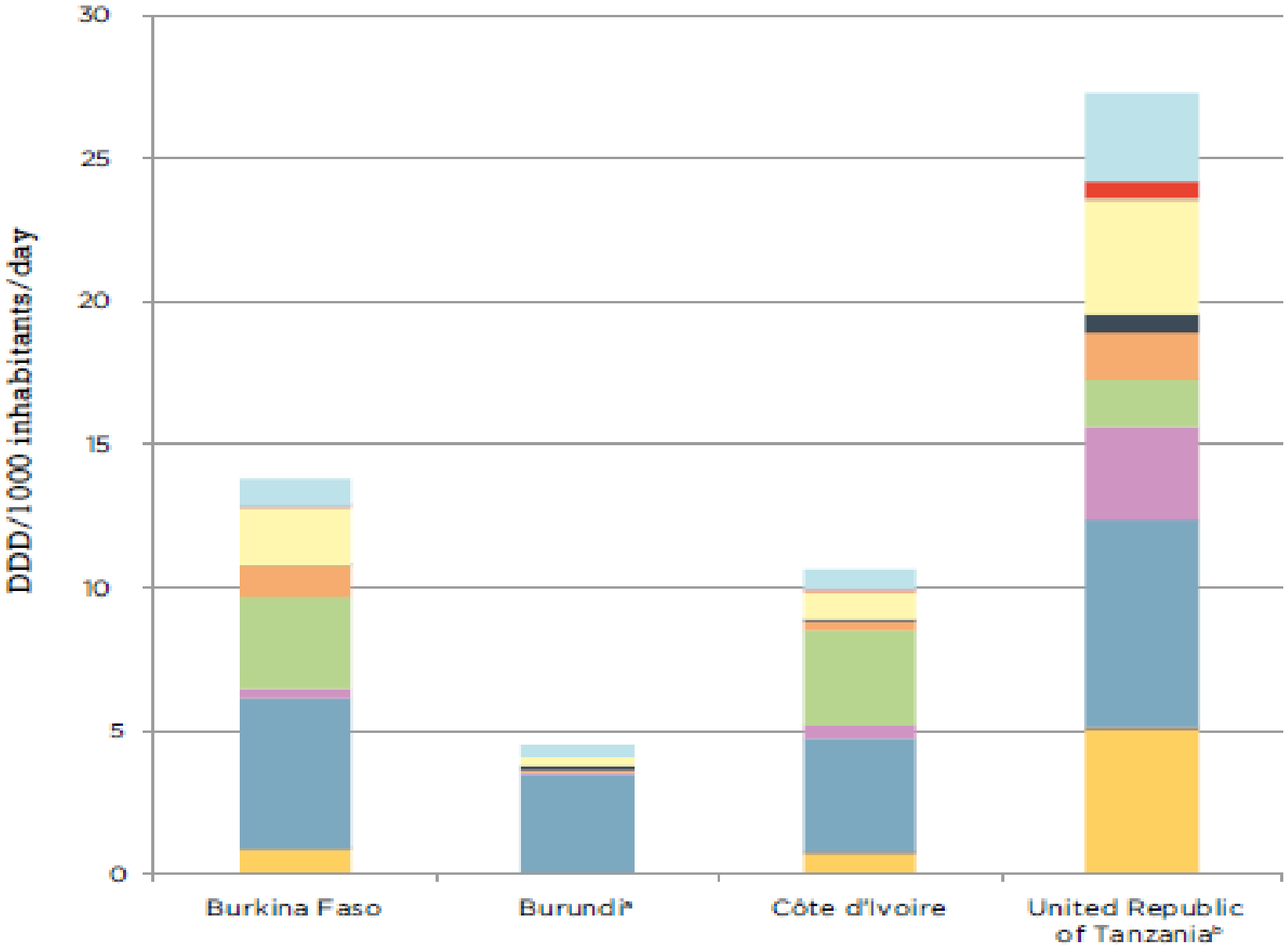
"There is probably no chemotherapeutic drug to which in suitable circumstances the bacteria cannot react by in some way acquiring 'fastness' [resistance]."

—Alexander Fleming, 1946



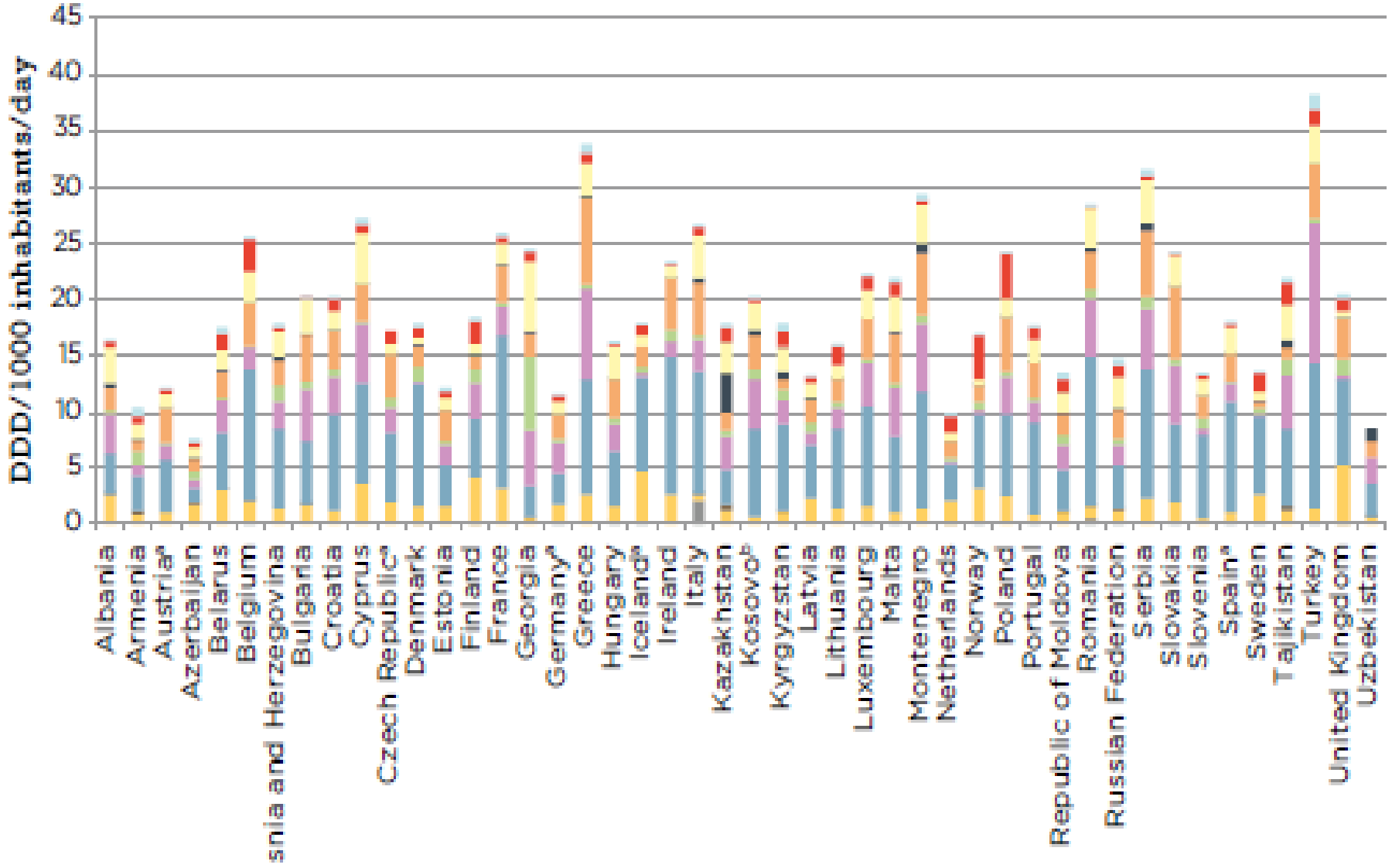
Singer et (2016): Review of Antimicrobial Resistance in the Environment and Its Relevance to Environmental Regulators. Frontiers in Microbiology. 7. 10.3389

Fig. 4.2 Consumption of antibiotics (DDD per 1000 inhabitants per day) by pharmacological subgroup in four countries of the African Region (2015)



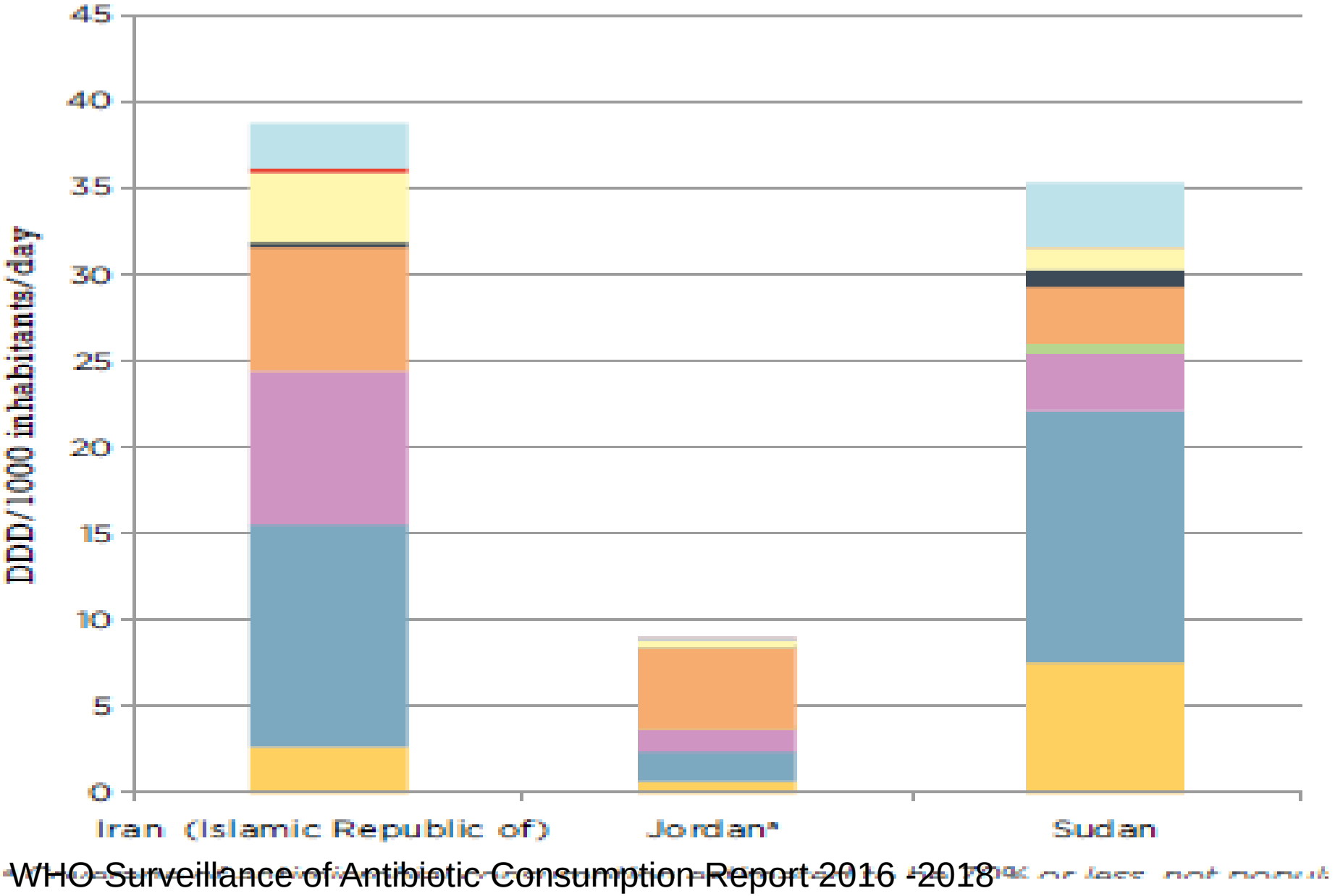
WHO Surveillance of Antibiotic Consumption Report 2016 -2018

Fig. 4.6 Consumption of antibiotics (DDD per 1000 inhabitants per day) by pharmacological subgroup in 45 countries and Kosovo[a] of the European Region, 2015



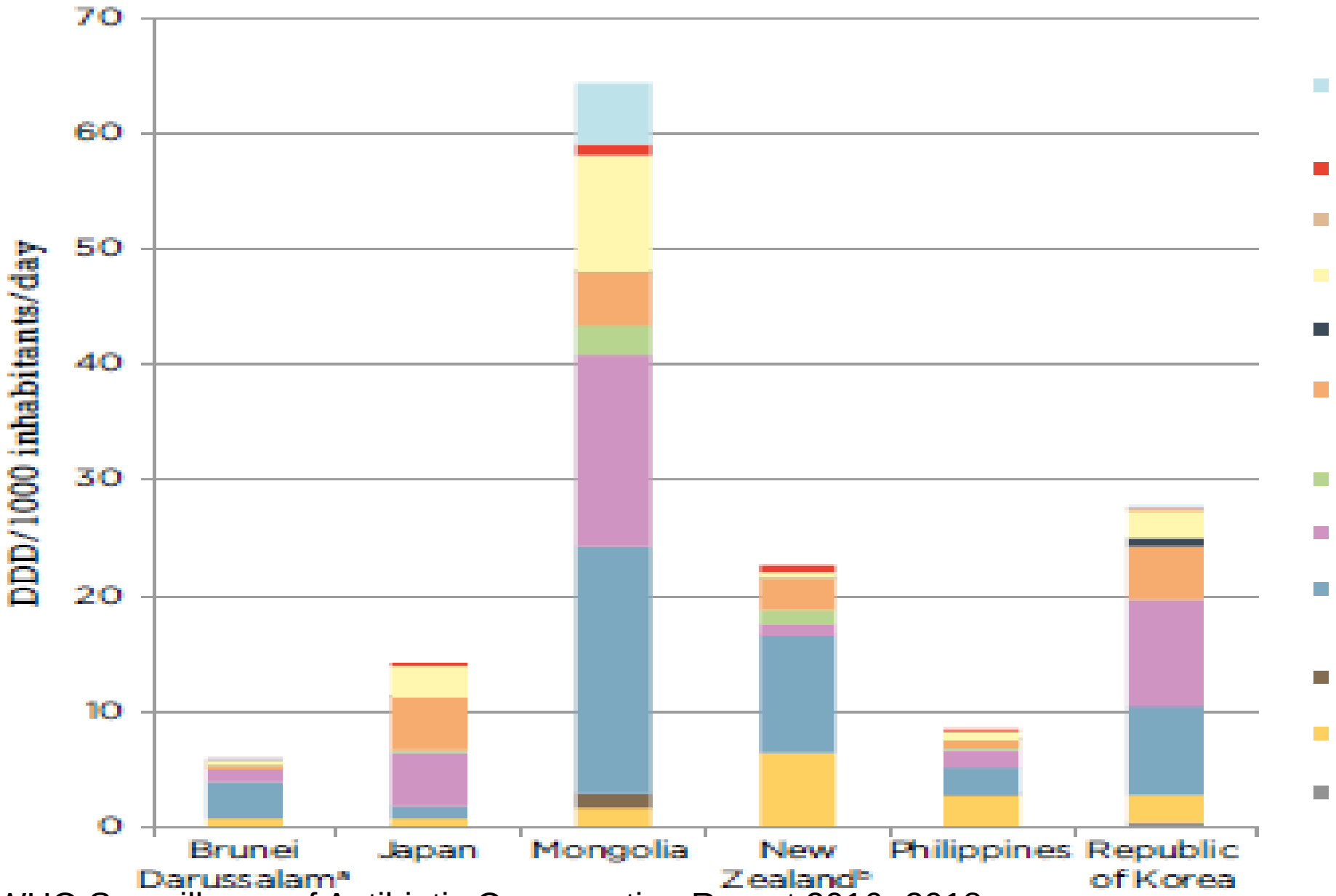
WHO Surveillance of Antibiotic Consumption Report 2016 -2018

Fig. 4.8 Consumption of antibiotics (DDD per 1000 inhabitants per day) b
subgroup in three countries of the Eastern Mediterranean Region, 2015



WHO Surveillance of Antibiotic Consumption Report 2016 -2018

Fig. 4.10 Consumption of antibiotics (DDD per 1000 inhabitants per day) by subgroup in six countries of the Western Pacific Region, 2015



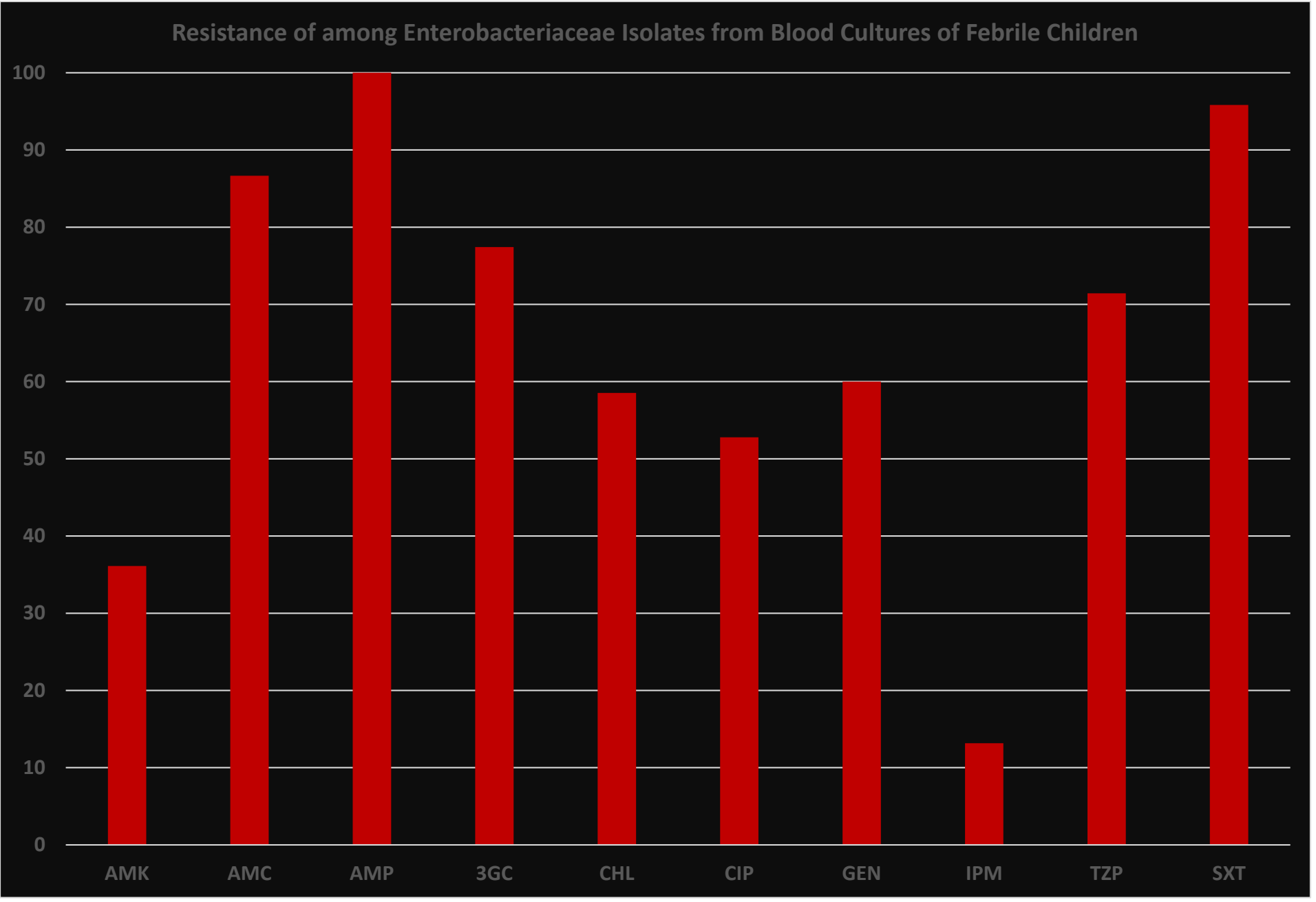
WHO Surveillance of Antibiotic Consumption Report 2016 -2018

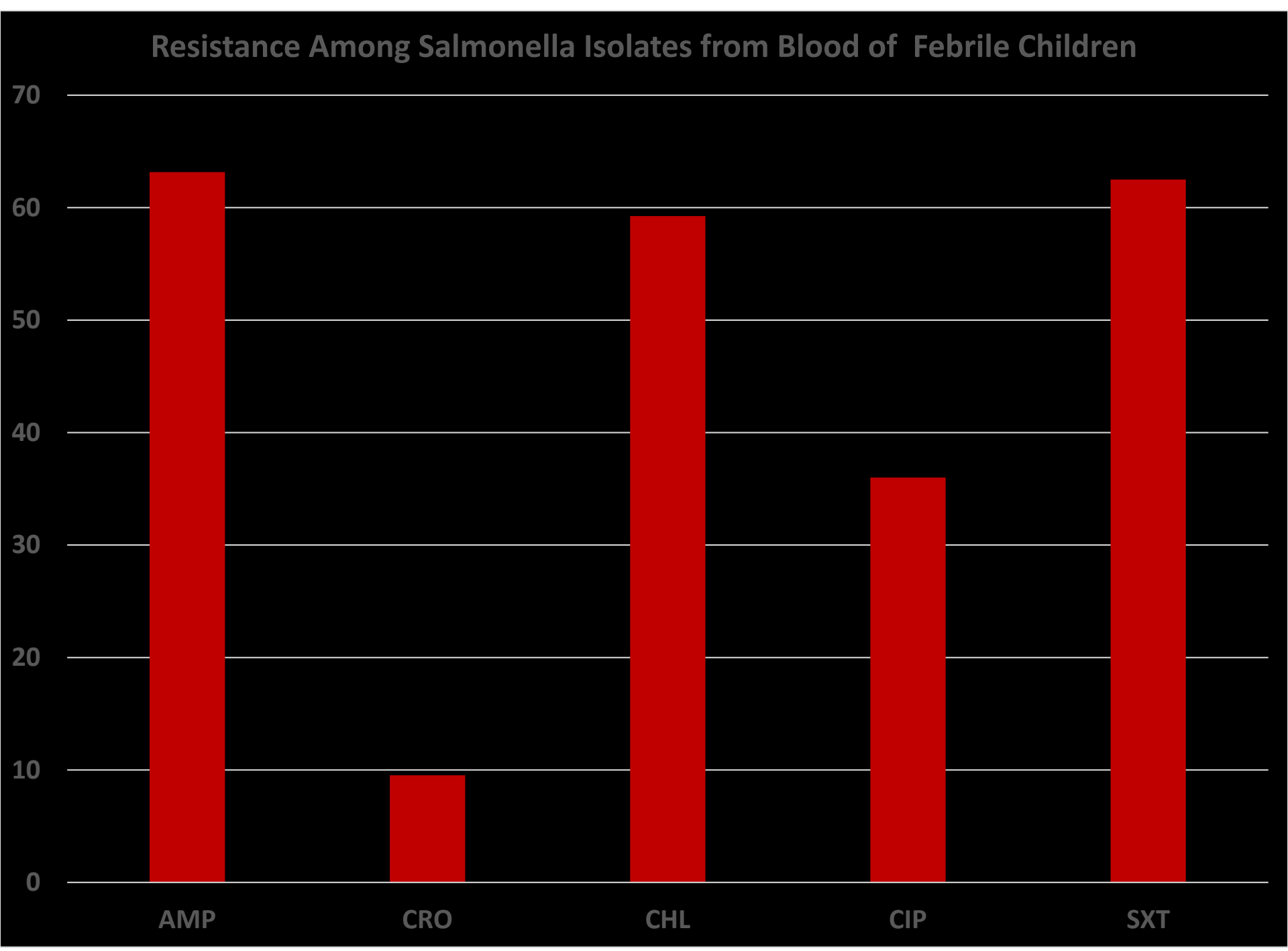
Prevalence of Infections due to Priority Pathogens

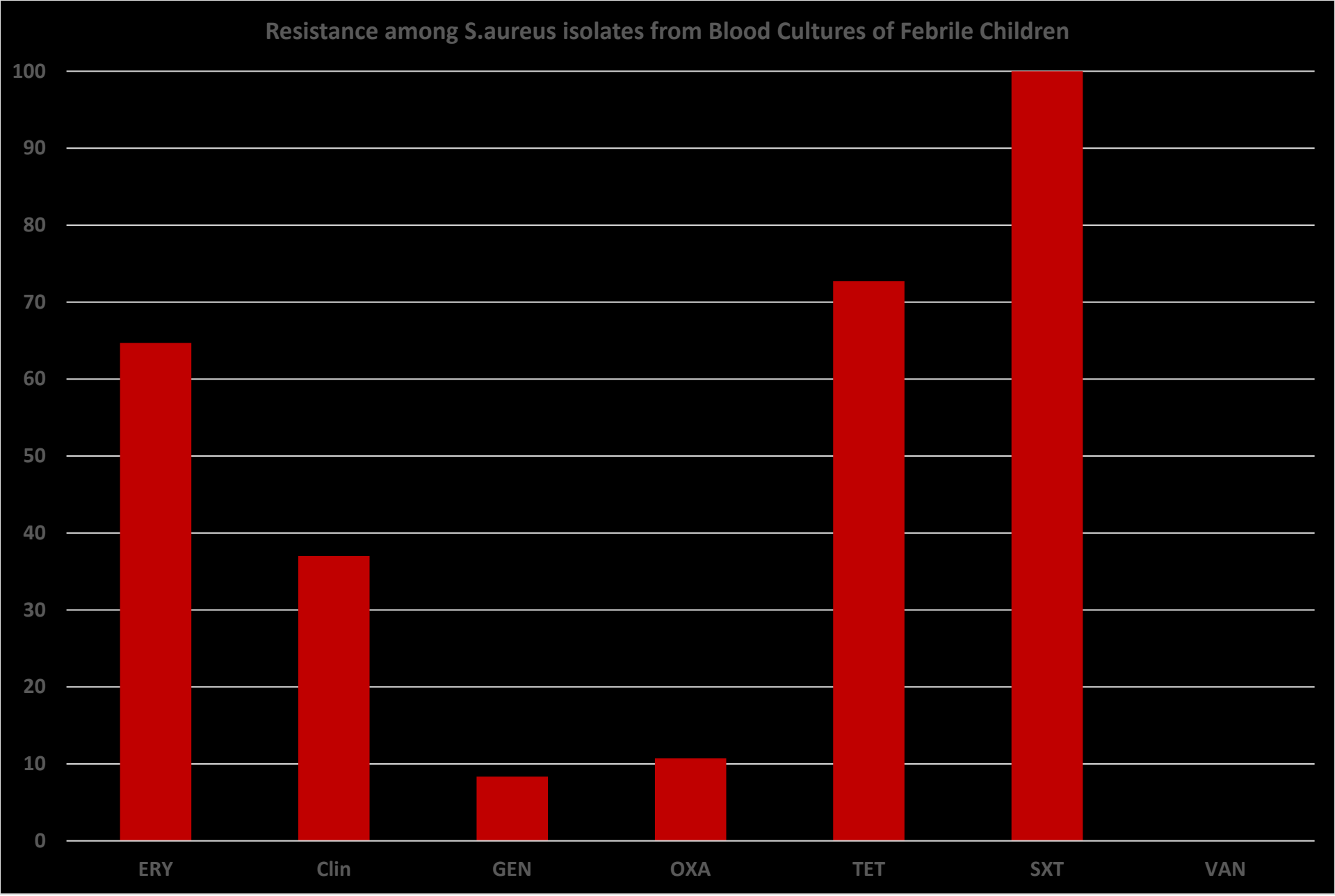
Estimating the number of infections caused by antibiotic-resistant *Escherichia coli* and *Klebsiella pneumoniae* in 2014: a modelling study

Elizabeth Temkin, Noga Fallach, Jonatan Almagor, Beryl Primrose Gladstone, Evelina Tacconelli, Yehuda Carmeli, on behalf of the DRIVE-AB Consortium

- 50 million serious infections including 6・4 million due to 3rd generation cephalosporin resistant *E.coli* and *K.pneumonia*
- 3.1 million serious infections including 0・5 million bloodstream infections due to carbapenem resistant strains


Resistance of among Enterobacteriaceae Isolates from Blood Cultures of Febrile Children
100
90
80
70
60
50
40
30
20
10
0
AMK
AMC
AMP
3GC
CHL
CIP
GEN
IPM
TZP
SXT


Resistance Among Salmonella Isolates from Blood of Febrile Children
70
60
50
40
30
20
10
0
AMP
CRO
CHL
CIP
SXT


Resistance among S.aureus isolates from Blood Cultures of Febrile Children
100
90
80
70
60
50
40
30
20
10
0
ERY
Clin
GEN
OXA
TET
SXT
VAN

Global Response to the AMR Problem

68th World Health Assembly, May 2015 Adopted the Global Action Plan on AMR

Countries were tasked to develop National Action Plans for AMR by 2017

The UN has Put in Place the Interagency Coordination Group

World Organisation for Animal Health

World Health Organization

UNEP

Global Antimicrobial Resistance Surveillance System

Manual for Early Implementation


WHO Report
on Surveillance
of Antibiotic
Consumption

The Fleming Fund

Review on Antimicrobial Resistance

Tackling drug-resistant infections globally

U.S. Government Global Health Security Agenda Partners

ASANTE SANA