Om sumukhayanamaha

Kenyan Point Prevalence Survey of Antimicrobial Consumption and Resistance

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I have no disclosures or conflicts of interest

Dr. Revathi, Kenya on the WHO essential diagnostics list and what it means for Africa

2018-09-18   **In May of 2018, the WHO released the first-ever list of essential diagnostics to improve diagnosis and treatment outcomes to the delight of many champions of antimicrobial resistance across the globe. In Africa, the release of this list was particularly exciting to one doctor in Nairobi, Kenya, who has long been an advocate for the development of such a list.**

Professor Gunturu Revathi, Aga Khan University Hospital, Nairobi, Kenya, holding a lecture at an EPN meeting.

ReAct Africa, reached out to Professor Gunturu Revathi, Associate Professor of Clinical Microbiology at the Aga Khan University in
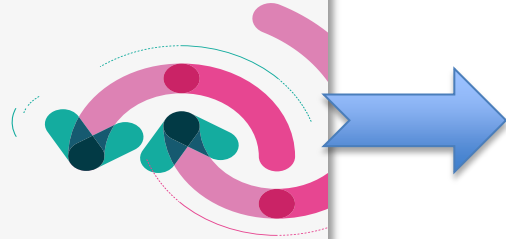
AMR is a Complex problem

National Action Plans- Coherent with whole of Society engagement.

GLOBAL ACTION PLAN ON ANTIMICROBIAL RESISTANCE — World Health Organization

REPUBLIC OF KENYA

NATIONAL ACTION PLAN ON PREVENTION AND CONTAINMENT OF ANTIMICROBIAL RESISTANCE

MINISTRY OF HEALTH

MINISTRY OF AGRICULTURE, LIVESTOCK AND FISHERIES AND BLUE ECONOMY

DRAFT TUE 17th OCT

Table 4. Susceptibilities of Gram negative organisms: 2012 to 2014.

Organism	Source	Year	Number	Amox	Amox/Clav	TMP/SMX	Cipro	Cefurox	Cefotax	Gent	Amikacin	Mero	Ntfn
E. coli	Urine	2012	1047	20%	66%	24%	68%	78%	83%	84%	100%	100%	86%
E. coli	Urine	2013	903	21%	68%	25%	66%	76%	81%	84%	100%	100%	86%
E. coli	Urine	2014	962	22%	68%	23%	66%	74%	79%	85%	100%	100%	86%
K. pneumoniae	Urine	2012	135		56%	39%	84%	69%	72%	79%	99%	99%	
K. pneumoniae	Urine	2013	125		52%	45%	77%	58%	62%	69%	99%	98%	
K. pneumoniae	Urine	2014	105		53%	45%	76%	62%	65%	74%	100%	99%	
P. mirabilis	Urine	All	81	35%	83%	33%	93%	95%	99%	89%	100%	99%	
E. coli	Blood	2012	48	10%	50%	15%	33%	42%	46%	79%	98%	100%	
E. coli	Blood	2013	44	2%	39%	11%	48%	46%	52%	64%	100%	100%	
E. coli	Blood	2014	47	15%	43%	19%	43%	53%	55%	64%	100%	100%	
K. pneumoniae	Blood	2012	31		36%	23%	61%	29%	36%	42%	100%	97%	
K. pneumoniae	Blood	2013	25		32%	32%	64%	32%	36%	48%	88%	92%	
K. pneumoniae	Blood	2014	27		26%	11%	52%	11%	15%	22%	85%	70%	

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Majority of antibiotic prescriptions in hospitals and clinics
have no indications
At times they have wrong indications
Antibiotics have many adverse effects

leads to the development and spread of AMR

AMR leads to increased hospital costs
and worse patient outcomes

Practice change is essential to cut down on the development and spread of antibiotic resistance (AMR)

Global PPS team

- **Lead Investigators**
  - **Pr Herman Goossens, Belgium**
  - **Ann Versporten, Belgium, Global PPS coordinator**
  - **Pr Dilip Nathwani, UK**
  - **Dr Peter Zarb, Malta**

Laboratory of Medical Microbiology Vaccine & Infectious Disease Institute University of Antwerp

BSAC The British Society for Antimicrobial Chemotherapy

BIOMÉRIEUX

- **Sponsor**

  bioMérieux is the sole sponsor of the GLOBAL Point Prevalence Survey.

  "The funder has no role in study design, data collection, data analysis, data interpretation, or writing the report. Data are strictly confidential and stored anonymously at the coordinating center of the University of Antwerp."

Surveillance

- **Measurement**
  - Resistance,
  - Antibiotic use,
  - Infections...

- **Objectives**
  - Assess simultaneously antibiotic use and antimicrobial resistance (AMR) impact
  - Define empiric treatments
  - Analyze epidemiology trends (resistance and antimicrobial use)
  - Evaluate interventions and allocate resources efficiently: set targets for improvement and measure the impact of interventions

- **To be done at hospital, local, regional, national, global levels**

Kenyan PPS study

The Study objective is to assess current patterns of antibiotic prescribing in a set of private and public hospitals in Kenya.
We hope to identify some problems and methods of quality improvements and inform standard practices across Kenya.

A second and important objective

Are there differences in prescription practices if microbiology and diagnostic support is available?
How much is utilization / contribution of lab results to escalate or de-escalate an antibiotic?

To meet these objectives,
we chose some hospitals with modern microbiology labs capacity and some with out such capacity
5 private and 5 public facilities are chosen
This method is hoped to give good case mix and representation across Kenya

We call our study Enhanced PPS due to the additional objective

The following centers are identified for running a pilot of PPS

The Aga Khan University Hospital - Nairobi
Gertrude Children Hospital - Nairobi
Nairobi West Hospital Nairobi
The Aga Khan hospital – Kisumu
Bomu Hospital – Mombasa
Mama Lucy Hsopital Nairobi
Machakos County referral Hospital- Machakos
Kisii County referral Hospital -Kisii
Jaramogi Oginga Odinga Teaching and Referral hospital

AMR is a multidisciplinary complex problem
Therefore, Kenyan study proposes to employ
Auditors consisting of
Multidisciplinary teams of
Nurses
Pharmacists
Lab technologists
and
Clinicians including all specialties

Standard PPS methods will be used
Additional audits for utilization of lab reports will be done
this part of the study will use a case control design
Impact of lab results on change of antibiotic will be assessed
in centers having lab support

Study will use Mixed Methodology Approach (both Qualitative and Quantitative methods)
Descriptive statistics will be used to analyze results
Differences in antibiotic use and indications between the selected areas will be compared using the Chi-square test or Fisher's exact tests.

Thank you for your attention!