



# ANTIMICROBIAL RESISTANCE NEWSLETTER

A Monthly Publication by the National Antimicrobial Secretariat

February 2021

ISSUE 02

## IN THIS EDITION

Spotlight  
Page 1&2

Featured Article  
Page 3

Publications  
Page

Mentorship  
Page 6

Events & Webinars  
Page 7

Event Gallery  
Page 8&9

Learn more  
Page 10

## FEATURED EVENT



*AMR Community of Practice Launch*

### **Establishing A Community of Practice for AMR in Nigeria using A One Health Approach**

The Fleming fund launched the National One Health Antimicrobial Resistance/Antimicrobial Usage Community of Practice (COP) on February 24<sup>th</sup>, 2021 at Transcorp Hilton Hotel, Abuja. It aimed at providing a social learning platform for all stakeholders who work in human, animal, and environmental health to collaborate, share ideas, find solutions, and build innovations in identifying new resistant bacterial threats or resistance patterns and transmission pathways to tackle AMR and improve antimicrobial use (AMU).

The DG of NCDC, Dr Chikwe Ihekweazu gave a welcome address after which goodwill messages were taken from MDAs and partners in the Health, Environment and Agricultural sector.



Participants at the AMR Community of Practice Launch

Dr Tochi Okwor who serves as the Antimicrobial Resistance Coordination Committee (AMRCC) chair gave a presentation on Overview of the National One Health AMR Response.

A keynote address on how One Health is critical to achieving improved health outcomes in AMR response was given by the Minister of Health and a One Health Global Leader on AMR, Prof. Onyebuchi Chukwu.

The mission, goal, objectives and promotion mechanisms for the AMR/AMU Community of Practice was presented by Dr Abiodun Egwuenu and Prof Aderemi Kehinde led participants in taking the Antibiotic guardian pledge.

Following the launch, the first meeting on establishing a practice for AMR in Nigeria using a one health approach was held on February 25<sup>th</sup>, 2021 at Reiz Continental Hotel, Abuja.

The objectives of the community of practice meeting were four-fold:

- Discuss the practicalities of setting up the CoP;
- Discuss the operation of the COP;
- Discuss on how the COP will work; and
- Discuss on topics of interest for the first year with emphasis on prioritizing the first six months.

A communiqué was developed and issued at the end of the meeting.

**“The community of practice (CoP) is an organized group of professionals who share the same interest in resolving and issue, desire for improving skills and learning from each other”**

**~DG NCDC**

## Surgical Site Infection (SSI) Study: A Brief

The SSI Study is a component of the Advancing Infectious Disease Research Across Nigeria (AIDRAN) project, an initiative of a consortium led by the Nigeria Centre for Disease Control (NCDC), with support from the United States Centers for Disease control and prevention (US CDC).

The general objective of the AIDRAN project is to conduct high quality public health research with focus on epidemiologic, clinical, and laboratory-based projects, surveillance, and research of infectious diseases as well as other public health threats of local importance in Nigeria, led by a consortium led by NCDC, together with other partners namely the African Field Epidemiology Network (AFENET), Georgetown University (GU) and US-CDC.

The SSI study is a prospective active surveillance study which aims to establish key SSI epidemiologic indicators, microbiologic profiles, determine risk factors, SSI prevention process indicators and Antimicrobial resistance (AMR) patterns. The study will be implemented at two hospitals, namely, Obafemi Awolowo University Teaching Hospitals Complex (OAUTHC) Ile-Ife, Osun State, and National Hospital, Abuja. The study target population is all patients who are due for or have had targeted general surgeries as well as caesarean sections and are on admission within the participating hospitals during a 6-month study surveillance period.

Data will be collected in compliance with the country's regulatory requirements, adhering to international ethical principles of human subject's research. This study will provide epidemiologic data that will inform the development of effective Infection Prevention and Control (IPC) interventions and will also serve as a benchmark for expanded SSI surveillance in Nigeria. Sites' engagement has commenced.



## PUBLICATIONS

### **Learning from IPC strategies for COVID-19 to mitigate AMR in rural Nigerian communities**

Rachael Osagie

Antimicrobial resistance (AMR) is an emerging and serious public health threat in both developed and developing countries. Findings from a survey in Nigeria showed that about a third of the general public consume antibiotics obtained without prescription. There is an overall poor understanding of antimicrobial resistance and/or proper use of antibiotics. Read full article [here](#):

### **Monitoring antimicrobial resistance in Ghana: a focus on the hospital environment**

Abiola Isawumi and Lydia Mosi

Ghanaian researchers and experts have raised alarms via various studies into prevalence, epidemiology and characterization of drug-resistant bacteria, especially those in relation to hospital facilities and environments. Overall, worthwhile progress has been made in monitoring antimicrobial resistance (AMR) in Ghana, however, there is a need for coordinated efforts to tackle this menace.

### **Antibiotic use prior to seeking medical care in patients with persistent fever: a cross-sectional study in four low- and middle-income countries. Edited by** Brecht Ingelbeen, Kanika D.

Community-level antibiotic use contributes to antimicrobial resistance, but is rarely monitored as part of efforts to optimize antibiotic use in low- and middle-income countries (LMICs). This article aims at investigating aetiologies of infections in patients

Read the paper [here](#):

### **Causes of antibiotic shortages and the solutions to address them**

Enrico Baraldi

There is no doubt that the world needs new antibiotics, especially truly innovative ones with new modes of actions to attack drug-resistant bacteria and counter the silent surge of antimicrobial resistance (AMR). Identifying the causes of shortages of antibiotics and proposing solutions to address them is just the first step in a long and complex process of change that will need to involve the whole antibiotics field, including industry, healthcare, public authorities and transnational bodies. Read full article [here](#):

### **Helicobacter pylori patient isolates from South Africa and Nigeria differ in virulence factor pathogenicity profile and associated gastric disease outcome**

Pia Palamides, Tolulope Jolaiya, Ayodeji Idowu, et al

*Helicobacter pylori* is a gram-negative, spiral-shaped bacterial pathogen and the causative agent for gastritis, peptic ulcer disease and classified as a WHO class I carcinogen. While the prevalence of *H. pylori* infections in Africa is among the highest in the world, the incidence of gastric cancer is comparably low. The authors established a network of study sites in Nigeria (NG) and South Africa (ZA) to gain an overview on the epidemiological situation. Read more

### **Efflux pump activity, biofilm formation and antibiotic resistance profile of *Klebsiella* spp. isolated from clinical samples at Lagos University Teaching Hospital**

Sharon Akinpelu, Abraham Ajayi et al

Nosocomial and community acquired multidrug resistant *Klebsiella* infections are widespread resulting in high morbidity and mortality due to limited number of antibiotics treatment options. This study investigated efflux pump activity, biofilm forming potential and antibiotic susceptibility profile of *Klebsiella* spp. isolated from clinical samples in a tertiary hospital in Lagos Nigeria. [Read more](#)

## PUBLICATIONS

**Leapfrogging Laboratories: the promise and pitfalls of high-tech solutions for antimicrobial resistance surveillance in low-income settings**  
Iruka N Okeke, Nicholas Feasey et al

The scope and trajectory of today's escalating antimicrobial resistance (AMR) crisis is inadequately captured by existing surveillance systems, particularly those of lower income settings. AMR surveillance systems typically collate data from routine culture and susceptibility testing performed in diagnostic bacteriology laboratories to support healthcare. Here, we outline hurdles to effective resistance surveillance in many low-income settings and encourage an open attitude towards new and evolving technologies that, if adopted, could close resistance surveillance gaps. [Read more](#)

**Impact of an antimicrobial stewardship programme on reducing broad spectrum antibiotic use and its effect on Carbapenem-Resistant Acinetobacter Baumannii (CRAB) in hospitals in Jordan.** Edited by Dawood Yusef, Wail A. Hayajneh

This article aims to evaluate the impact of an antimicrobial stewardship programme (ASP) on reducing broad-spectrum antibiotic use and its effect on carbapenem-resistant Acinetobacter baumannii (CRAb) in hospitalized patients.

Read the paper [here](#):

**COVID-19 Pandemic and Antimicrobial Resistance: Another Call to Strengthen Laboratory Diagnostic Capacity in Africa.** Edited by Beverly Egyir, Noah Obeng-Nkrumah et al

Aimed at developing five new treatments by 2025 to fight drug resistant infections, focusing on infections, sepsis in newborns and infections in hospitalized adults and children. Organize by Global Antibiotic Research and Development Partnership (GARDP).

Read the paper [here](#):

**Underestimation of coinfections in COVID-19 due to non-discriminatory use of antibiotics.**  
Edited by Chien-Yi Chang, Kok-Gan Chan

This Journal illustrate the recurrence of seasonal influenza epidemics which is attributed to the continuous evolution of influenza viruses, which enables them to change pathogenicity and escape from human adaptive immunity. The selection advantage of influenza virus is largely contributed by a few key amino acids (AA) substitutions on the surface glycoprotein haemagglutinin (HA) Identifying and measuring the importance of these key sites which are crucial in understanding patterns of influenza activities. Read the article [here](#):

**Prolonged Treatment of COVID-19 Pneumonia with High flow Nasal Oxygen: A Story of Oxygen and Resilience** G Audley, P Frankenfeld

This paper describes COVID-19 pandemic as a significant strain on the oxygen delivery infrastructure of health facilities in resource constrained health systems. Also discuss the oxygen delivery infrastructure needed for intervention, as well as the psychosocial impact on those undergoing treatment.

[Read the paper here](#).

**Survey of Antibiotic and Antifungal Prescribing in Patients with Suspected and Confirmed COVID-19 in Scottish Hospital** Seatonabcheryl et al

This article highlights the following; Antibiotic prevalence survey of 2/5 hospitalised SARS-CoV-2 patients at the epidemic peak in Scotland, Antibiotics in 38% SARS-CoV-2 patients in wards and critical care units and Narrow spectrum antibiotics predominant in wards reflecting national recommendations

Read the paper [here](#):

## PUBLICATIONS

**Treatment of COVID-19: implications for antimicrobial resistance in Africa** Chinwe Juliana Iwu, Portia Jordan, Ishmael Festus Jaja et al

There is currently no approved pharmaceutical product for the treatment of COVID-19. However, antibiotics are currently being used for the management of COVID-19 patients in many settings either treat to co-infections or for the treatment of COVID-19 itself. In this commentary, we highlight that the increased rates of antimicrobial prescribing for COVID-19 patients could further worsen the burden of antimicrobial resistance (AMR). We also highlight that though AMR is a global threat, Africa tends to suffer most from the consequences. [Read more](#)

**Prescription Fill Patterns for Commonly Used Drugs During the COVID-19 Pandemic in the United States** Muthiah Vaduganathan, Jeroen van Meijgaard et al

Conflicting information regarding the benefits of hydroxychloroquine/chloroquine and azithromycin in coronavirus disease 2019 (COVID-19) treatment and hypothetical concerns for drugs, such as angiotensin-converting enzyme (ACE) inhibitors and angiotensin receptor blockers (ARBs), have challenged care during the pandemic. [Read more](#)

**Antimicrobial use, drug-resistant infections and COVID-19** Timothy M. Rawson, Damien Ming, Raheelah Ahmad et al

Coronavirus disease 2019 (COVID-19) has placed huge strains on health and social care systems and resources globally. The significance of infection prevention and control through measures such as hand hygiene, social distancing and self-isolation have now been emphasized at a societal level. It is important to consider the short and longer-term consequences that COVID-19 may have on antimicrobial use and drug-resistant infections. [Read more](#)

**COVID-19 pandemic and antimicrobial resistance: Another call to strengthen laboratory diagnostic capacity in Africa** Beverly Egyir, Noah Obeng-Nkrumah, George B. Kyei

The coronavirus disease 2019 (COVID-19) pandemic caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) resulted in 7145539 confirmed cases and 408025 deaths by 03 June 2020. Understandably, almost all attention has been on COVID-19, which continues to take lives and stretch healthcare systems around the world. A critical issue receiving much less attention during this pandemic is the effect it could have on antimicrobial resistance (AMR). With no proven therapy for COVID-19, prescribers are more likely to use antibiotics indiscriminately for treatment and prevention of presumed bacterial co-infections. [Read more](#)

**Challenges around COVID-19 at a tertiary-level healthcare facility in South Africa and strategies implemented for improvement** T Thomasl, A E Laher et al

SARS-CoV-2 has resulted in a global pandemic within months following its initial detection. South Africa (SA), like many other countries, was not prepared for the impact this novel infection would have on the healthcare system. In this paper, the authors discuss the challenges experienced while facing COVID-19 at a tertiary-level institution in Gauteng province, SA, and the dynamic strategies implemented to deal with the epidemic. [Read more](#)

**Antibiotic Consumption and Stewardship at a Hospital outside of an Early Coronavirus Disease 2019 Epicenter** Deanna J. Buehrle, Brooke K. Decker, Marilyn M. Wagener et al

The impact of coronavirus disease 2019 (COVID-19) on the volume of antibiotic usage and stewardship practice is unclear. In a rapid review and meta-analysis of studies through mid-April 2020, bacterial infections were reported in 7% and 8% of hospitalized patients and critically ill hospitalized patients with COVID-19, respectively. [Read more](#)

## MENTORSHIP AND OTHER OPPORTUNITIES

### **One Health Track: Master of Science of Global Health Delivery (MGHD)**

Through its flagship Master of Science in Global Health Delivery (MGHD) program, \*UGHE is pleased to offer a one-year blended program providing specialized skills in One Health\*, and the needed cross-cutting skills to improve the health of animals, the environment and humans through a transdisciplinary, multi-sectoral and holistic approach.

Register [here](#):

### **Fleming Fund Online AMR Course**

The Fleming Fund, in partnership with the Open University, is releasing a free online course comprised of 24 online modules, including videos, diagrams, reflective activities, self-assessment questions and quizzes.

Register [here](#):

### **Free Technical Course on Tackling Antimicrobial Resistance**

The Fleming Fund, in partnership with the Open University in Nigeria, is launching a series of 25 technical modules that will be released during 2021 to help laboratory professionals, clinicians and leaders learn how to combat drug resistance better. This month there are eight modules available with 4 more to be released in March. Remaining modules will be released in the coming months. For a full timetable of module release.

Register [here](#):

### **FAO Webinar Recording**

The Food & Agriculture Organization and the World Organization for Animal Health has made available the following webinar recording "International instruments on the use of antimicrobials across the human, animal and plant sectors".

The recording can be accessed [here](#):

To access the recording enter: 290!#kqA

## EVENTS AND WEBINARS

### Discovering and developing new treatments for tuberculosis

#### Link to register:

<https://attendee.gotowebinar.com/register/394450209091477264?source=societies>

**Date: Wed, Mar 24, 2021 2:30 PM - 4:00 PM WAT**

The presentation will discuss:

- 20 Years of Impact: Introduction to TB Alliance and an overview of TB drug development in the 21st century
- The TB drug discovery and development landscape today: state of the global pipeline and survey of TB Alliance's programs
- Case study: a new therapy for highly drug-resistant forms of TB
- Where do we go from here? New partnerships and new treatment paradigms to reimagine TB treatment

The presentation will be followed by a Q&A

### Learning from COVID-19 to tackle the silent pandemic of antibiotic resistance

#### Link:

<https://attendee.gotowebinar.com/register/3151890131955239691?source=societies>

**Date: Thu, Mar 4, 2021 4:00 PM - 5:30 PM WAT**

COVID-19 has demonstrated pandemic preparedness requires a global coordinated effort, and no country can do it alone. Strengthening our ability to fight the silent pandemic of drug-resistant infections must also ensure affordable access to vital health tools, including new and improved treatments. This webinar will focus on how we can apply the lessons learned from COVID-19 to tackle drug resistance and ensure access to appropriate antibiotics.

### Memorial Lecture for Professor Jacques Acar. AMR Stewardship: We all have a role to play

#### Link to register:

<https://flemingfund.us19.list-manage.com/track/click?u=86aa1b52fef13b29fe7caa377&id=2e89dffa04&e=6af4423085>

**Date: 23 March 2020, 8:00-9:30GMT**

Infectious diseases, antimicrobial resistance and surveillance were at the heart of Jacques Acar's lifelong work. An acclaimed clinical microbiologist, Dr Acar was author of over 500 publications and held various global roles on antimicrobial resistance committees including acting as head of the WHO task force on AMR and as a member of the French Ministry of Health's AMR committee. He acted as an expert advisor to the Fleming Fund from 2016 until his death in 2020, always championing stewardship and the proper use of antimicrobials.

### One Health AMR Stewardship Conference

#### Link to register:

<https://attendee.gotowebinar.com/register/3151890131955239691?source=societies>

**Date: 10-12 March 2021**

The virtual One Health AMR Stewardship Conference on 10-12 March 2021 is now accepting abstracts.

You can submit yours here:

<https://flemingfund.us19.list-manage.com/track/click?u=86aa1b52fef13b29fe7caa377&id=a15f71782c&e=6af4423085>

## PHOTO GALLERY



**National training of AMR Surveillance Sites on analytic methods for bacteriology and AMR detection using National SOPs**



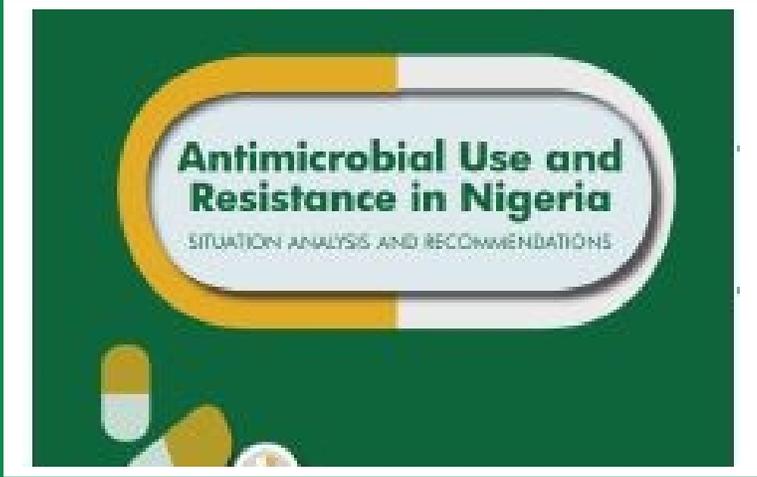
**Advocacy to Department of Hospital Services, Federal Ministry of Health to introduce the Surgical Site Infections Surveillance pilot**



**Launch of National One Health AMR/AMU Community of Practice at the Transcorp Hilton Hotel, Abuja**



## LEARN MORE ABOUT AMR RESPONSE IN NIGERIA

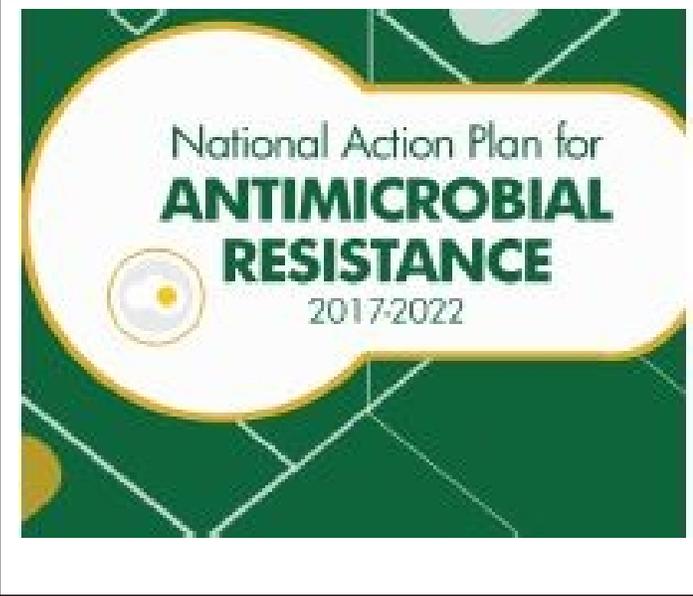


### Antimicrobial Use and Resistance in Nigeria

SITUATION ANALYSIS AND RECOMMENDATIONS

#### National AMR situation:

- Antimicrobial use and resistance in Nigeria: situation analysis and recommendations, 2017  
[https://ncdc.gov.ng/themes/common/docs/protocols/56\\_1510840387.pdf](https://ncdc.gov.ng/themes/common/docs/protocols/56_1510840387.pdf)
- Joint External Evaluation 2017  
[https://ncdc.gov.ng/themes/common/docs/protocols/70\\_1511012198.pdf](https://ncdc.gov.ng/themes/common/docs/protocols/70_1511012198.pdf)



### National Action Plan for ANTIMICROBIAL RESISTANCE

2017-2022

#### Response plans:

- National Action Plan for Antimicrobial Resistance  
[https://ncdc.gov.ng/themes/common/docs/protocols/77\\_1511368219.pdf](https://ncdc.gov.ng/themes/common/docs/protocols/77_1511368219.pdf)
- National Action Plan for Health Security  
<https://ncdc.gov.ng/themes/common/files/establishment/5e88f9e22d2b4e4563b527005c8a0c43.pdf>
- Laboratory guidelines for AMR surveillance One Health Strategic Plan  
[https://ncdc.gov.ng/themes/common/docs/protocols/93\\_1566785462.pdf](https://ncdc.gov.ng/themes/common/docs/protocols/93_1566785462.pdf)

#### To join the National AMR surveillance system (call to action):

- Assess the laboratory assessment checklist by clicking on the URL: <https://ncdc.gov.ng/diseases/guidelines>
- Click on the NCDC AMR surveillance self-assessment checklist and complete the self-assessment form
- Send the form to [amr\\_surv@ncdc.gov.ng](mailto:amr_surv@ncdc.gov.ng)

#### For other disease conditions

- Read the Weekly Epidemiology Report [here](#)