



Advocacy

World Antimicrobial Awareness Week (WAAW) 2022 Activities Awareness Walk by the National Institute of Health

The National Institutes of Health (NIH) Islamabad organized an awareness walk to commemorate the WAAW 2022 for tackling AMR on 21st November 2022. “**Going Blue**” was used as a theme color during the walk. Health and paramedical officials, veterinary doctors, teachers, students and public

from all walks of life attended the activity. Dr Muhammad Salman Chief PHLD, Dr. Ejaz Khan from human health sector, and Dr. Javed from Veterinary sector addressed the participants of the walk and conveyed key messages to the public.



National Symposium on AMR

A two days symposium on Antimicrobial Resistance was held at the National Institute of Health with the purpose to highlight all the activities performed under National Action Plan on AMR by AMR&IPC program, NIH along with collaborations from different stakeholders. The symposium was organized according to the objectives of NAP, following the sequence of awareness raising, AMR and AMC surveillance, Infection prevention and Control, Optimization of Antimicrobials Use, Economic burden of AMR and Research. Day 1 was inaugurated with the remarks by executive director

NIH, and WR WHO. Parliamentary secretary for health “Ms. Shazia Somro” was invited as the Chief Guest. All the key stakeholders including World Health Organization, Fleming Fund Country Grant Center for Disease Control & Prevention presented their work on AMR. The role of academia, Drug Regulatory Authority of Pakistan (DRAP), Islamabad Health Regulatory Authority (IHRA), health institutions, and hospitals in combating Antimicrobial Resistance was highlighted through presentations of respective personnel.



Poster Competition Kids



National AMR Program, NIH organized a Poster competition for kids themed on Antimicrobial resistance, its spread, and prevention. Award distribution ceremony was held on 21st November 2022. Appreciation certificates were distributed by honorable Chief Guest **“Mr. Jamal Shah”** among all the participants whereas Shields, Cash prize and certificates were given to top three position holders.



1st Position

2nd Position



3rd Position



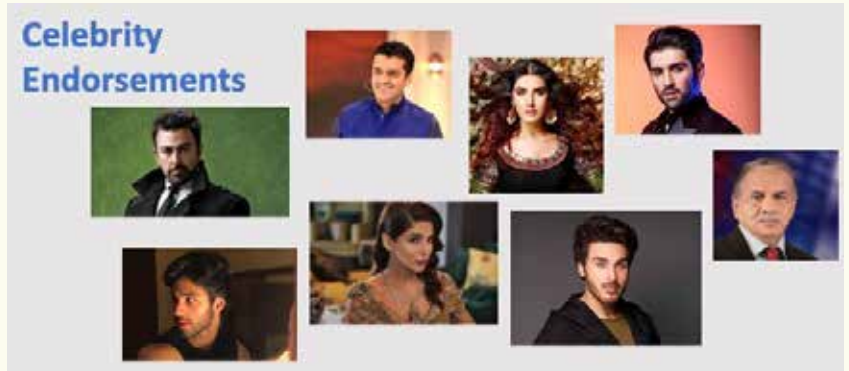
Video Competition WAAW 2022



A video competition involving young professionals was organized by the NIH in collaboration with the Fleming Fund Country Grant on the theme “Preventing Antimicrobial Resistance Together” during the WAAW 2022. An assessment criterion has been established for the compilation of results. The top three winners of the competition were awarded cash prizes and certificates. The Executive Director NIH distributed cash prizes and appreciation certificates among the participants of the Video Competition 2022 during the Prize Distribution Ceremony held at the closing day of the symposium. The results and success stories of the winners were published in the national newspapers.

Video Messages of Leading National Celebrities

The leading celebrities and anchors of the country shared key messages on Antimicrobial Awareness during WAAW 2022. The videos were displayed on the National TV channel and social media (Facebook, LinkedIn, and Twitter). They informed the public on the health hazards of antibiotics misuse.



Third National Coordination Meeting of Technical Working Group (TWG) on Regulation of Drug Rules

The NIH conducted two days meeting of the technical working group during 23-24 October 2022 for the revision of drug rules to regulate antimicrobial sales, mainly Antimicrobial Consumption (AMC). During the meeting the challenges faced by drug inspectors in all provinces to regulate the antimicrobials sales were discussed. It was concluded that there is a need to control sales and irrational prescribing by physicians. There is a dire need to engage other stakeholders for this purpose as PMA, YDA, and to train of doctors and paramedic staff on rational use of antibiotics. The national-level technical draft was formulated with the mutual consensus of all members. All the responsible members for its formulation, endorsement and implementation were present. It was decided that Islamabad would serve as a pilot reference site to implement these rules, and same will be replicated in provinces in the next phase.



Third National Coordination Meeting of TWG on Standard Treatment Guidelines

NIH Pakistan conducted third meeting of Technical Working Group on development of "National Antimicrobial Guidelines". It will be one of the milestones under the National Action Plan on AMR. Under the objective four of the National Action Plan, there comes the need to "Optimize the use of Antimicrobial medicines in human and animal health". The optimization can be achieved by providing the standard/guidelines for treatment in both sectors. Antimicrobial stewardship program can

be further supported for responsible use of antimicrobials in human and animal sectors. Based on this requirement and under 4th Strategic priority, "Standard treatment guidelines for Antimicrobial use" is suggested keeping in view of local data and infections. The technical working group discussed the process and methodology to be adapted under supervision of National AMR Focal Point. There is consensus to use the GRADE methodology for rating the quality of evidence for the guidelines.

Consultative Meeting with National Institute of Child Health Karachi



The NIH team Microbiology department visited National institute of child health, Karachi for the briefing of their project: Behavioural cost-effective interventions to improve outpatient prescribing for acute respiratory infections in Pakistan. The team had an interactive discussion with NICH executive director, deputy director, and representative of Research Council. Hospital management provided a brief orientation of their setup and welcomed the NIH team for their support.



Visit to Central Drug Laboratory (CDL) Sindh

A Pharmacists team NIH visited Central drugs laboratory (CDL) Karachi and met the director CDL Dr Saif ur Rehman Khattak. Major discussion included the quality challenges of drugs mainly antibiotics and need for bioequivalence studies to justify the quality. CDL has been ISO 17025 certified laboratory and progressing towards the phase of WHO pre-qualification.



Visit to Provincial Drug Testing laboratory (DTS) Sindh

The pharmacists team NIH visited the provincial drug testing laboratory Sindh to meet the director (Mr. Adnan Rizwi), along with chief inspector of drugs (Mr. Ghulam Ali Lakho) to provide an overview of National Action Plan on AMR, particularly focusing on one of its activity

regarding accreditation of DTS and its assessments. The DTL asked for support towards certification and informed the team on available facilities and equipment and highlighted the issue of lack of skilled staff.



Second Consultative Meeting to Deliberate on AMR Surveillance Plan for Aquaculture

Keeping in view the role of fisheries in food safety & security and the importance of AMR in aquaculture, MoNFS&R and Fleming Fund took the lead to devise a plan for AMR surveillance in aquaculture. To this end, 2nd meeting to deliberate on AMR surveillance plan for aquaculture was held at the National Veterinary Laboratory Islamabad. Experts from Fisheries Development Board, Fisheries and Aquaculture Program (NARC) and other federal institutes attended the meeting to discuss the draft document.



Awareness of Dairy Farmers on AMR and AMU at Civil Hospital Mardan and Dairy Colony Peshawar

Fleming Fund AH team conducted seminar for livestock farmers at Civil Veterinary Hospital Mardan and Dairy Colony Peshawar. At these sessions, more than 50 dairy farmers were acquainted with antimicrobial resistance, biosecurity, herd health management and

control of transboundary animal diseases to minimize the use of antibiotics for animals. Awareness material on importance of rational use of antimicrobials, antimicrobial resistance, and control of animal diseases in Urdu language was provided to all farmers.

Consultative Meeting of the National Laboratory Working Group for Animal Health (NLNG-AH)



M/o NFS&R notified national laboratory networking group for animal health (NLNG-AH) in 2020 for the guidance on veterinary laboratories activities and diagnostic harmonization for major zoonotic diseases including AMR. The group has completed its first milestone i.e., development of Pakistan Veterinary Laboratory Policy and Guidelines. After this achievement, another meeting of this group held at Islamabad to identify the next action items for the strengthening of veterinary laboratories in Pakistan.

Awareness Session for Veterinary Students at the University of Agriculture Peshawar

The Fleming Fund in liaison with Animal Husbandry Commissioner organized the awareness session on antimicrobial resistance (AMR), antimicrobial use (AMU), transboundary animal diseases (TADs) and herd health management for veterinary students at University of Agriculture, Peshawar on 30th September 2022. Prof. Dr. Sarzamin Khan Dean Faculty of Veterinary Medicine emphasized on the rational use of antimicrobials in veterinary sector.



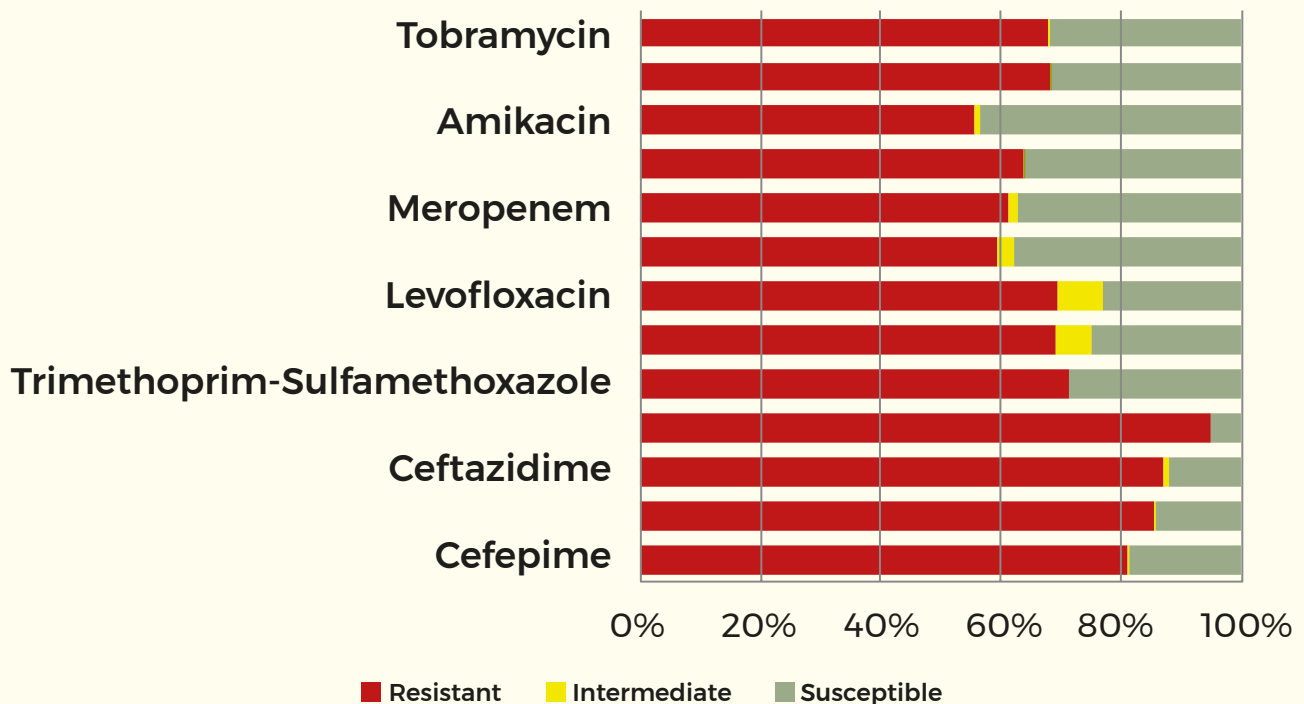
Surveillance Data

Human Health

AST Profile of *Klebsiella Pneumoniae*



AST Profile of *Klebsiella pneumoniae* Isolated from Blood Year 2021



A total of 1719 isolates of *Klebsiella pneumoniae* reported from 20 sentinel laboratories from blood culture. The antimicrobial susceptibility profile of *Klebsiella pneumoniae* shows a high-level resistance against Cephalosporins (Cefotaxime 94.8%, Ceftazidime 87 %, Ceftriaxone 85.5% and Cefepime 81%). Similarly, among Carbapenems high resistance is seen (59.5 % for Imipenem, 61.4% for Meropenem, and 63.7% for Ertapenem). Likewise, for Fluoroquinolones 69.1% resistance against Ciprofloxacin and 69.4% against Levofloxacin.

Antibiotics	Resistant	Intermediate	Susceptible
cefepime	81	0.2	18.7
ceftriaxone	85.5	0.2	14.3
ceftazidime	87.1	0.8	12.2
cefotaxime	94.8	0	5.2
Trimethoprim-Sulfamethoxazole	71.2	0	28.5
Ciprofloxacin	69.1	6.1	24.8
Levofloxacin	69.4	7.4	23.1
Imipenem	59.5	2.7	37.8
Meropenem	61.4	1.4	37.2
Ertapenem	63.7	0.03	36
Amikacin	55.8	0.7	43.6
Gentamicin	68.1	0.2	31.7
Tobramycin	67.9	0.4	31.7

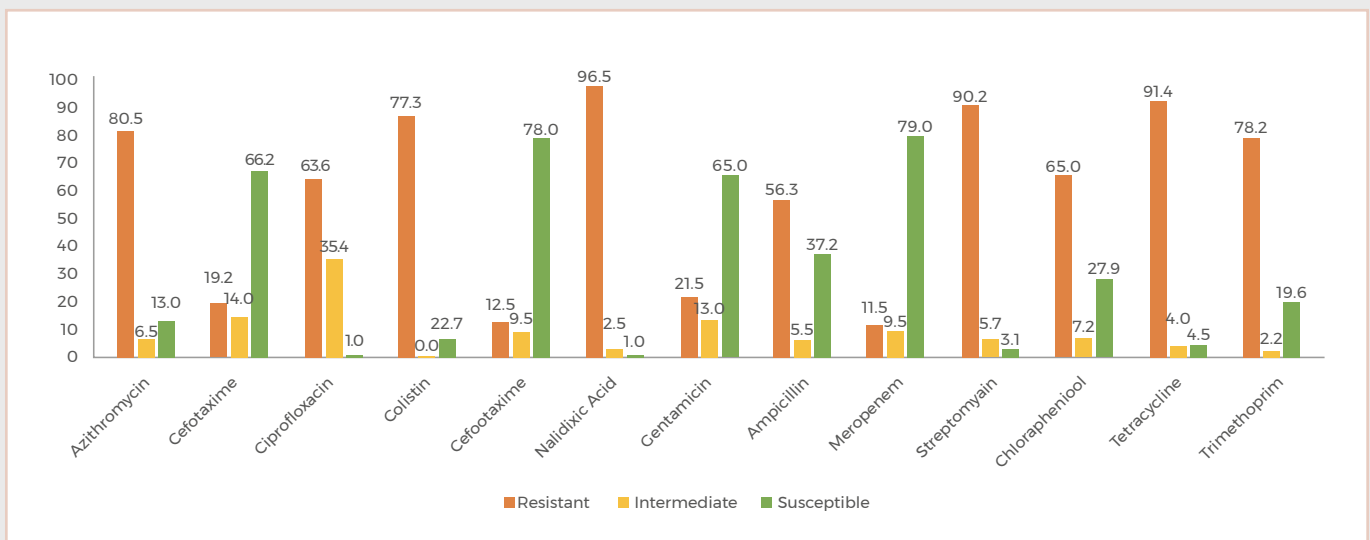
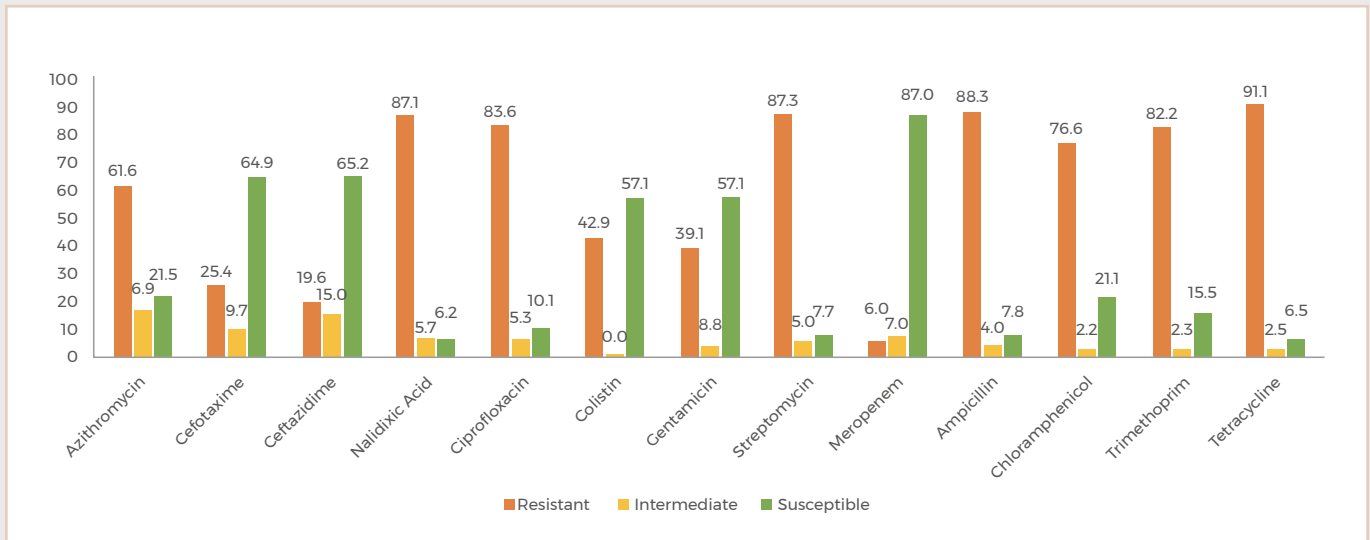
Animal Health

The AMR surveillance pilot is aimed to initiate a monitoring and surveillance program for AMR in selected production systems of healthy food animals. The specific objectives are

- To streamline and strengthen all components of the AMR surveillance system for animals, including epidemiological skills (sample design, data analysis, and data reporting), sample collection and processing, laboratory diagnostic capability, and data management.
- Estimate the prevalence of resistance amongst selected bacteria in poultry

and large ruminants (cattle and buffalo) to antibiotics that the WHO has specified as critical for use in humans and other antibiotics of importance to animal health.

For the surveillance pilot in poultry, NRLPD has received 1704 pooled caecal samples from the freshly slaughtered chicken as of May 31st, 2022, from Gilgit, Islamabad, Karachi, Lahore, Mansehra, Muzaffarabad, Peshawar, Rawalpindi and Quetta. NVL received 2421 individual faecal samples from cattle and buffalo slaughterhouses in Gilgit, Hyderabad, Islamabad, Lahore, Muzaffarabad, Peshawar and Quetta as of May 31st, 2021.



Antibiotics including Cefotaxime, Ceftazidime, Colistin, Gentamicin, Meropenem showed high level of susceptibility for E. coli isolated from poultry faecal samples, however, there were significant resistant percentage against Azithromycin, Nalidixic acid, Ciprofloxacin, Streptomycin, Ampicillin, Chloramphenicol, Trimethoprim and Tetracycline.

Implementation of a National Awareness Raising and Behavioral Change strategy on Antimicrobial Resistance

AMR Community awareness through Community health workers/LHWs

The Lady Health Workers (LHW) Programme launched by the Government of Pakistan (GOP) in 1994, have significantly accomplished the reach of primary health care services. To achieve health-related sustainable goals (SDGs), and Universal Health Coverage (UHC) Lady Health Workers are vital for our healthcare delivery system and effective workforce during health emergencies i.e., earthquake in 2005, floods in 2010 and more recently during COVID-19 pandemic in Pakistan.

Considering new developments in the health sector, horizontal integration of PHC programmes, lessons learnt, scientific evidence and emerging needs, the

roles & responsibilities and strategic direction of lady health workers were revisited. And, MoNHSCR&C and Provincial DOH acknowledged to included AMR community awareness counselling cards in the National LHW counseling cards manual.

This initiative taken by the MoNHSCR&C in consultation with provincial health departments will be a cornerstone in achievement of the objectives of the AMR National Action Plan and will promote behavior change through communication programs targeting different audience at the community level through Community Health Workers.



Provincial Updates Sindh Province

ISO 15189 Accreditation of Civil Hospital Karachi

The Pakistan National Accreditation Council (PNAC) has approved granting accreditation to the microbiology laboratory of Dr. Ruth Pfau Civil Hospital, Karachi. It is the first-ever public sector provincial lab and one of the largest labs in Sindh to have received accreditation. The Fleming Fund Country Grant successfully supported the Ruth Pfau Civil Hospital Karachi (CHK) in obtaining ISO15189 accreditation. ISO 15189 accreditation involves an independent assessment of the medical laboratory that includes an examination of personnel qualifications and competence, equipment, reagents and supplies, quality assurance, and analytical, pre-analytical, and post-analytical factors. The lab covers not only the entire Karachi City but also the interior of Sindh province and parts of Balochistan province. The management of the hospital thanked Fleming Fund Country Grant team for their continuous guidance, technical support, and financial assistance over the last two years in improving laboratory capacity to achieve ISO 15189 accreditation.

Updates AMR Dashboard

After positive feedback from the provincial AMR focal persons from the human health and the department of Livestock, the Fleming Fund Country Grant has implemented the "User security policy" for the Dashboard of key AMR indicators for Sindh province. The policy outlines User rights at different levels of system usage for both admin users and end users of the Dashboard from the AMR Secretariat, Department of Health, Department of Livestock and Fisheries, and the sentinel sites. As a follow-up to the online application demo of the under-construction Dashboard of key AMR indicators for Sindh province to provincial sentinel sites of human health, application access has been provided to the session participants. Key stakeholders from Civil Hospital Karachi, Jinnah Postgraduate Medical Centre, and the Liaquat University of Medical & Health Sciences, Jamshoro can now log in through designated usernames and passwords and navigate the Dashboard.



AMR MEMBERSHIP NETWORK NIH

Please click on the link for AMR Membership form
<https://www.nih.org.pk/amr-membership/>

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