



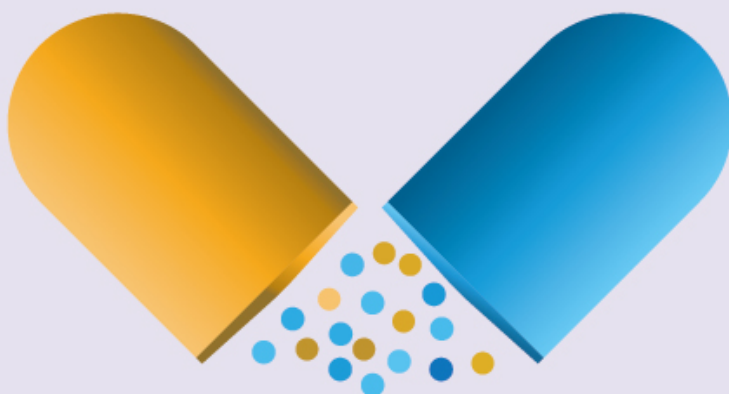
Ministry of Health & Family Welfare
Government of India



National Consultation to Optimize Antimicrobial Use in Human Healthcare

2–3 May 2024

National Centre for Disease Control, New Delhi



National consultation to optimize antimicrobial use in human healthcare

REPORT

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Executive summary

Containment of antimicrobial resistance (AMR) is a global and national priority. The National Action Plan on AMR (NAP-AMR) identifies optimizing antimicrobial use in all sectors, including human health as a strategic priority. Misuse of antimicrobials not only promotes the development of AMR but also leads to higher costs and poor patient outcomes. Antimicrobial use (AMU) and AMR are impacted by a number of factors, including prescription practices, patient behaviour, antimicrobial manufacturing, distribution/sales, promotion of AMU and disposal of antimicrobials.

The Government of India has taken various initiatives for rational AMU however challenges still exist. National Centre for Disease Control (NCDC) in collaboration with WHO Country Office for India organized this national consultation to bring together all key stakeholders in order to share information about existing initiatives to optimize AMU in human health, identify challenges and solutions to prevent antimicrobial misuse, and develop a roadmap to optimize AMU in human health sector.

Drug regulators and AMR champions from more than 20 States and Union Territories attended the consultation – including key government officials from Ministry of Health and Family Welfare (MoHFW), Central Drugs Standard Control Organisation (CDSCO), AMR experts and representatives from professional councils and associations. The technical deliberations identified key challenges, best practices and suggestions for optimizing AMU under various themes – regulations, prescriptions, manufacture, effluents/disposal, procurement, antimicrobial use practices and monitoring in hospitals, clinics & nursing homes. The experts proposed an exhaustive list of activities and recommendations for implementation at various levels of the health system and by key stakeholders.

The suggestions included monitoring of data on manufacture and consumption of antimicrobials through a national level database and a unified portal for tracking antimicrobials from source to patients; focusing on quality of antimicrobials through a special biannual sampling drive; raising awareness through blue colour coding of antimicrobial packaging; establishing drug take-back initiatives with standard protocols such as de-blistering tablets before disposal; and establishment of stewardship practices in hospitals, clinics and nursing homes.

Concerted efforts are needed across departments by regulators, prescribers and dispensers, and at all levels of the health system. The consultation helped identify effective and actionable strategies for key stakeholders. The identified strategies are expected to be included/integrated with the NAP AMR's implementation and monitoring framework by the relevant stakeholders.

Background

Containment of antimicrobial resistance (AMR) is a global and national priority. The National Action Plan on AMR (NAP-AMR) identifies optimizing antimicrobial use in all sectors, including human health as a strategic priority. Misuse of antimicrobials not only promotes the development of AMR but also leads to higher costs and poor patient outcomes. Antimicrobial use (AMU) and AMR are impacted by a number of factors, including prescription practices, patient behaviour, antimicrobial manufacturing, distribution/sales, promotion of AMU and disposal of antimicrobials. Therefore, optimizing AMU needs coordinated actions by various stakeholders.

The Government of India has a number of initiatives for rational antimicrobial use – including Schedules H and H-1 in Drugs and Cosmetics rules to regulate the sale of antimicrobials, sentinel surveillance of antimicrobial use in healthcare facilities through the National Antimicrobial Consumption Network (NAC-NET) coordinated by the National Centre for Disease Control (NCDC), National Treatment Guidelines for Antimicrobial Use in Infectious Diseases, and the National Guidelines for Antimicrobial Stewardship (to be launched soon).

To optimise the use of antimicrobials in human health, a two-days national consultation was organized to bring together all key stakeholders with the following objectives:

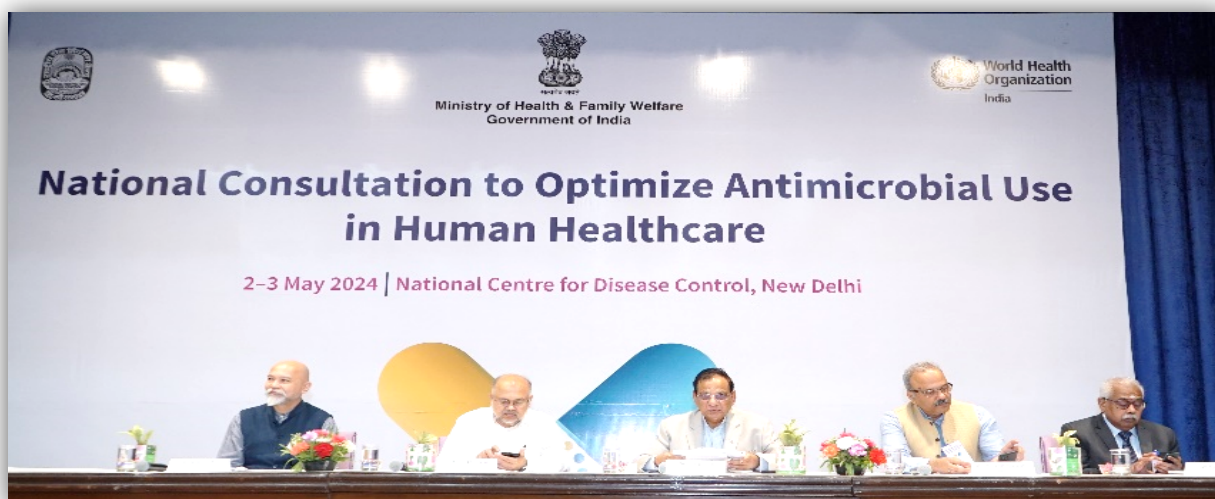
- Share information about existing initiatives to optimize AMU in human health
- Identify challenges and solutions to prevent antimicrobial misuse
- Develop a roadmap to optimize antimicrobial use in human health sector

Drug regulators and AMR champions from more than 20 States and Union Territories attended the consultation – including key government officials from Ministry of Health and Family Welfare (MoHFW), Central Drugs Standard Control Organisation (CDSCO), AMR experts and representatives from professional councils and associations. The consultation was structured into two technical sessions and two group work sessions to have a balance of information sharing and discussions. The technical deliberations identified key challenges, best practices and suggestions for optimizing AMU under various themes – regulations, prescriptions, manufacture, effluents/disposal, procurement, antimicrobial use practices and monitoring in hospitals, clinics & nursing homes.



Inaugural

The inaugural session of the consultation was organized in the new auditorium complex of National Centre for Disease Control (NCDC) on 2 May 2024. The consultation was inaugurated by Dr Vinod Paul (Member Health, NITI Aayog), along with Prof (Dr) Atul Goel (Director General Health Services and Director NCDC), Dr Roderico Ofrin (WHO Representative to India), Dr Rajeev Singh Raghuvanshi (Drug Controller General of India), and Dr RV Asokan (President, Indian Medical Association).



Dr Lata Kapoor (Additional Director and Head, Centre for Bacterial Diseases and Drug Resistance, NCDC) welcomed the dignitaries and the participants to the consultation and explained its objectives. She also anchored the inaugural session, which had addresses by the dignitaries.



Dr Asokan spoke about the presence of Indian Medical Association (IMA) at state and block level, with a strong representation of the private sector which has an important role to play in AMR containment. He emphasized IMAs pivotal role in promoting behavioural change through continuous medical education, fostering of responsible antimicrobial use and reduction of spread of infections in healthcare settings. He reiterated IMA's commitment for AMR containment.

Dr Raghuvanshi emphasized the key role of regulators in the entire lifecycle of antimicrobials starting from sourcing of raw materials, production, quality checks, sales, and disposal of the unused antimicrobials. He outlined a number of activities being undertaken towards implementation of regulatory mechanisms including banning of irrational combinations, sampling for quality testing,



review meetings etc. He highlighted the need to focus on quality of antimicrobials and suggested regular sampling of antimicrobials for quality testing. He also appreciated the Kerala model of tackling AMR and highlighted the need to understand how Kerala model can be replicated in other States. Lastly, he reiterated the need to implement existing provisions and regulations and focusing on sensitization of the community.



Dr Ofrin spoke about the global burden of AMR, its prioritization globally and in India, and identified inappropriate use of antimicrobials as a key driver for AMR. He highlighted the importance of the consultation as a forum for regulators, prescribers, dispensers and policy makers to identify best practices and innovations to optimise antimicrobial use and develop a roadmap to optimize antimicrobial use in human healthcare with the aim of containing AMR in India.

Professor Dr Atul Goel spoke about the possibility of return of the pre-penicillin era where untreatable infections would become leading cause of death and emphasized the key role of drug regulators in controlling the sale of antibiotics. He emphasized that it is the responsibility of dispenser to have a receive-back mechanism for unused/expired antimicrobials. Given the rampant over-the-counter sale of antibiotics he highlighted the need to have strong visuals in pharmacies to prevent over-the-counter sale of antibiotics without prescription.



Dr Paul in his keynote address outlined the potential of AMR in affecting India's achievements towards Sustainable Development Goals and hampering the health system's response to new challenges including future threats. He also discussed the potential impact of AMR on the country's economy. Stating that AMR is a silent pandemic and its containment requires all stakeholders to work together for the accomplishment of the overarching framework of 6 strategic objectives of NAP-AMR. He stressed on

investing in preventive strategies such as hand washing, provision of clean food and clean water in rural areas. He also emphasized the need of diagnostics, treatment and vaccines for difficult to treat pathogens. He detailed the drafting of the National Action Plan on Antimicrobial Resistance (NAP-AMR) 2.0 which will be implemented from 2024-2028. Highlighting the need to change attitude of business-as-usual, he mentioned several ideas to optimize AMU including visuals for judicial prescription of antimicrobials, a citizen charter detailing their responsibility in optimizing AMU, and formation of a National Alliance of Medical Professionals for AMR under the leadership

of Indian Medical Association. He emphasized on adhering to standard treatment guidelines while prescribing antibiotics. And antimicrobial usage as per WHO recommendation (AWaRe category) must be embedded in the standard treatment guidelines. He stressed on implementing antimicrobial stewardship (AMS) including monitoring of antibiotic usage along with the pattern of resistance. He also proposed to develop an AMS model with hierarchical antimicrobial stewardship practice for controlled access to high end antibiotics. He also asked IMA to develop a mechanism /regulated system of AMSP through wisdom, participation and commitment of the professionals.

A vote of thanks was proposed by Dr Anuj Sharma, followed by a group photograph with dignitaries and all participants.

Technical session 1

Surveillance of antimicrobial use in NAC-NET

Dr Arti Bahl (Additional Director, Division of Epidemiology, NCDC) gave an overview of the challenge of AMR and the national response focused on the fourth strategic priority of the NAP-AMR

on optimizing the use of antimicrobial agents in human health, animals and food. She highlighted the differences between antimicrobial use and consumption and role of different stakeholders (drug regulators, prescribers and dispensers) in AMC, WHO's AWaRe classification of antibiotics. She detailed NCDC's National Antimicrobial Consumption Network (NAC-NET) that comprises of 35 tertiary care institutes from 24 states and 3 Union territories in India. Thirty-three NAC-NET sites actively collect data for AMC and 25 NAC-NET sites have completed point prevalence surveys, and these have been compiled into NAC-NET reports.

ICMR's initiatives for optimizing AMU

Dr Kamini Walia (Scientist G and Program Officer – AMR, Indian Council of Medical Research) outlined the role of ICMR in optimizing AMU – through generation of reliable evidence, diagnostic stewardship, antimicrobial stewardship, infection prevention stewardship, transmission mechanisms, and One Health platforms for AMR research. She detailed ICMR's survey on AMS practices in 20 hospitals across India, developing capacity for AMS and initiating AMS activities in tertiary care hospitals in India – including development of antibiograms, antibiotic policy, AMS committees, point prevalence of cultures, antimicrobial consumption in ICUs, prescription audits, formulary restrictions, education and awareness. She also suggested establishing a certification system for better implementation of antimicrobial stewardship programmes.

WHO recommendations to optimize antimicrobial use

Dr Anuj Sharma (Team focal point AMR and IPC, WHO Country Office for India) highlighted the prioritization of AMR containment at the global level and within WHO. He spoke about the role of WHO in AMR containment, and support for Tracking AMR Country Self-Assessment Surveys and WHO guidance documents – especially people-centred approach to addressing antimicrobial resistance in human health. He detailed the importance of surveillance of AMR/AMC/AMU for optimizing AMU along with various WHO's tools including WHONET, AMC/GLASS tools and PPS protocol. He highlighted that AMS is key for optimizing AMU and World AMR Awareness Week is an opportunity for raising awareness towards optimizing AMU in the community.

Indian Drug and Cosmetic Rules regulating antimicrobial use

Dr Swati Srivastava (Deputy Drugs Controller General, Central Drugs Standard Control Organization headquarters) detailed various regulatory provisions of Schedule H and H1. She highlighted CDSCO's measures to optimize AMU including prohibition of colistin and its formulations in food producing animals, minimizing substandard antimicrobials and sale of antibiotics without prescriptions. A meeting of all drug regulators on AMR was held under the Chairmanship of Drugs Controller General India in February 2024. She spoke of the next steps

towards NAP-AMR 2.0 including a unified portal to track the supply chain (which has been implemented for top 300 drugs and can be expanded to antimicrobials), developing guidance to ensure implementation of Schedule H & H1 drugs, developing guidance for pharmaceutical waste management among others.

Best practices for optimizing AMU in Kerala

Dr Nandakumar KV (Additional Director Health Services – Medical & Hospital Administration, Kerala) spoke about India's first sub-national action plan on AMR – the Kerala Antimicrobial Resistance Strategic Action Plan (KARSAP) and various initiatives for its implementation. He highlighted a number of success stories including functional AMR committees in all 14 districts and 190 blocks, AMR surveillance network (KARS-NET) with 40 laboratories across the state, dispensing antibiotics in blue coloured covers, antibiotic smart hospitals, Programme for Return Of Unused Drugs (PROUD), monitoring of antibiotic prescriptions according to AWaRe classification, antibiotic literate Kerala campaign, Operation AMRITH (Antimicrobial Resistance Intervention for Total Health), etc.

Best practices for optimizing AMU in Madhya Pradesh

Dr Sagar Khadanga (Associate Prof., Medicine, AIIMS Bhopal) outlined Madhya Pradesh's journey in becoming India's second state to have a state action plan on AMR – being part of ICMR's Antimicrobial Resistance Surveillance Network (AMRSN), developing state's antibiotic policy and antibiotic handbook, training of more than three thousand medical officers and implementation of Madhya Pradesh State Action Plan for Containment of AMR (MP-SAPCAR). He highlighted future plans including revision of MP-SAPCAR and state antibiotic policy, incorporation of AMS to medical officers' curriculum, and development of state antibiogram and prescription audits.

Best practices for optimizing AMU in Delhi

Dr Sangeeta Sharma (President, Delhi Society for Promotion of Rational Use of Drugs, and Delhi's nodal officer for AMR) spoke about AMR activities in Delhi as the third state to have a SAPCAR. She provided an overview of antimicrobial consumption and use in Delhi government hospitals in terms of expenditure and drug utilization and highlighted the importance of training on antimicrobial stewardship.

Group work 1 – Regulating availability/access of antimicrobials

Discussed the current status, challenges and solutions on implementing Schedule H and H1 to optimise antimicrobial use and need for new/revised regulations; patient demand and pharmacists' dispensing antimicrobials without a doctor's prescription; telemedicine and e-prescriptions; prescription of antimicrobials by traditional medicine practitioners; monitoring the manufacture, distribution and sale of antimicrobials; licensing/manufacture of antimicrobials; effluents from pharmaceutical industry; and approval of fixed dose combinations.



Following were the key suggestions and recommendations across four core themes – regulations, prescriptions, manufacture and effluents/disposal.

Regulations

- Extend the portal to track and trace drugs to include antimicrobials
- Review the Drugs and Cosmetics rules, especially sections 20-B(3c) and 21-B
- Add “reserve” group of antibiotics to Schedule X
- Use blue colour to mark all antimicrobials, in alignment with WHO’s campaign “go blue for AMR”
- Strengthen the implementation of drug regulatory mechanisms and enforcement by the Drug Controllers.
- Start special sampling drive biannually to monitor quality of antimicrobials
- Revise the regulations to establish mechanisms for monitoring AMC/AMU as per AWaRe classification
- Regulate prescriptions to ensure registration number and signatures of doctors
- Clear Guidelines by the Central and State Govt. on prescription of WHAT antimicrobials by WHOM (registered medical practitioners).

Prescriptions

- Draft regulations regarding online sale of drugs through telemedicine, e-prescriptions and online pharmacies to be finalized/notified
- E-prescription should be defined in Drugs and Cosmetics Act

- Develop a software to track and monitor the usage of antimicrobials and develop a national database through unified portal for monitor antimicrobial manufacture, sale and distribution
- Start a campaign to educate the patients/public/consumers – traditional and social media

Manufacture

- Packaging of antimicrobials should be unique for easy identification
- All states to onboard ONDLS (Online licensing system) developed by CDAC
- Develop a National Database for antimicrobial manufacture and distribution
- Start quality testing of drugs in the field using point-of-care-tests through mobile vans
- Start awareness campaign about judicious use of antimicrobials
- Display of posters in hospitals and chemist shops.
- Ban on irrational Fixed Drug Combinations
- Strict penalties for violation of regulations/ manufacture of antimicrobials & FDCs without permission of CDSCO /SDCAs as applicable
- Implement the regulation (UCPMP 2024) on pharmaceutical marketing

Effluents/disposal

- De-blister tablets and dispose in boxes kept at local pharmacies/chemists, wellness centres, clinics/dispensaries – to be picked up by central biomedical waste treatment facilities (CBWTF)
- Ensure separate waste collection bins for antimicrobials – to be sent back to manufacturer or CBWTF for disposal as per BMWM rules and the provision of sealed waste bins for the collection of leftover/expired antibiotics under the Swatch Bharat mission.
- Formulate drug take-back initiative/programs
- Develop and strictly implement environmental standards like zero liquid discharge (ZLD) from pharmaceutical industries manufacturing antimicrobials
- Define surrogate markers for effective antibiotic free effluent treatment of wastewater
- Strengthen common effluent treatment plants (ETP)
- Simplify procedures of the pollution control boards
- Strictly comply and enforce revised Schedule M requirements



Technical session 2

AMR containment in India

Dr Lata Kapoor (Additional Director, Centre for Bacterial Diseases and Drug Resistance, NCDC) spoke about the burden of AMR through resistance patterns of key pathogens from the National AMR Surveillance Network (NARS-NET), as part of the national response for AMR containment, as well as National Action Plan on AMR (NAP-AMR) and implementation of its strategic priorities. She provided an overview of State Action Plans for Containment of AMR (SAPCAR) – currently endorsed by the State governments in five states/UT (Kerala, Madhya Pradesh, Delhi, Andhra Pradesh and Sikkim). NAP-AMR 2.0 is currently being developed under the leadership of NITI Aayog with whole of government approach to contain AMR, with dedicated unit and funding for NAP-AMR activities within each sector.

IMA initiatives to optimise antimicrobial use

Dr Narender Saini (Nodal officer and Chairman, Standing Committee on AMR, IMA-HQ) outlined the vision of IMA, and their capacity and commitment to address AMR. He informed about IMA's health manifesto which recognizes AMR containment and emphasized IMAs role in promoting behavioural change through continuous medical education, peer support, and fostering responsible AMU within the healthcare community and reducing the spread of infections in health care settings. He reiterated IMA's commitment to AMR mitigation efforts at all levels as done previously in the polio eradication program, national TB control program and during the COVID-19 pandemic.

Best practices for antimicrobial use in oro-dental infections

Dr Vijay Mathur (Professor and Head, Centre for Dental Education and Research, AIIMS Delhi) shared the process of developing evidence and consensus-based guidance document for antimicrobial use in oro-dental conditions – which included literature review, estimation of antimicrobial prescriptions due to dental conditions, stakeholder brainstorming meetings, online surveys, etc. He highlighted the importance of involvement of dental professionals in AMR containment to optimize AMU.

Best practices to optimize AMU at ABVIMS/RMLH

Dr Desh Deepak (Consultant pulmonologist, Dr Ram Manohar Lohia Hospital & Atal Bihari Vajpayee Institute of Medical Sciences, New Delhi) detailed various challenges in stewardship activities such as prescription according to AWaRe classification, hospital antibiotic policy, and other technical issues in implementing stewardship activities in hospitals. He further spoke of measures to overcome these challenges including determining prior antibiotic treatment, non-response to treatment, issues with clinical sample collection, etc. He reiterated the importance of education, communication and re-visiting and learning from practice, in order to optimize AMU in hospitals.

Best practices to optimize AMU at GMC Aurangabad

Dr Jyoti Iravane (Professor and Head, Microbiology, Government Medical College Aurangabad) provided an overview of AMU, AMC and AMSP at GMC-A including a detailed analysis of AMU, AMC and AMSP data from the Surgery and Medicine ICUs. She emphasized the importance of continued training for nursing staff and residents, availability of drugs, diagnostic stewardship, antibiotic policy and antibiotic audits.

Best practices to optimize AMU at CMC Vellore

Dr Prasannakumar Palanikumar (Assistant Professor, Infectious Diseases, CMC Vellore) provided an overview of CMC Vellore's journey of AMS from 1996 till date. He highlighted their institutional best practices including post-prescription review, point prevalence survey feedback, antibiotic guidelines, monitoring of antibiotic consumption, formulary restrictions, education and training, etc. He highlighted the importance of tailoring interventions to local settings, training of human resources for AMS, focusing on one department at a time and leveraging technology to inform AMU decisions.

Group work 2 – Optimizing AMU in hospitals, clinics & nursing homes

Discussed various aspects of optimizing AMU in hospitals, clinics & nursing homes, with focus on antimicrobials in essential medicines list; antimicrobials in hospital formularies using AWaRe classification; bulk/institutional procurement of antimicrobials; monitoring the consumption and use of antimicrobials in healthcare facilities; antimicrobial use and misuse in hospital pharmacies; antimicrobial use and misuse in clinics and nursing homes; and patient demand and doctors' prescription/dispensing of antimicrobials.



Following were the key suggestions and recommendations across four themes – procurement, antimicrobial use practices in hospitals, antimicrobial use practices in clinics and nursing homes, and monitoring.

Procurement

- National directives to states/UTs for tier-based availability of antimicrobials as per AWaRe classification
- Monitor quality through random checks by procurement agency using authorized labs
- Primary care institutions should ensure availability of “Access” category of antimicrobials
- “Reserve” category antimicrobials should be prescribed only by a defined group of doctors or prescriptions should be validated by a pre-authorized senior doctor
- Review the Essential Drugs List annually and update the formularies as needed
- Define accountability framework and timeline for procurement-related activities
- Computerize procurement data of antimicrobials.
- Review of availability and pricing of Access group of antimicrobials by National Pharmaceutical Pricing Authority.

Antimicrobial use practices in hospitals

- Develop hospital antibiotic policy and SOPs for its implementation
- Laws for compulsory prescription audits regularly in healthcare facilities
- Regularly update, implement and monitor standard treatment guidelines
- Focus on AMS trainings and behaviour change communications
- Make digital billing mandatory as recommended by Schedule H1

- Implement digital solutions for the monitoring and sharing information with authorities
- Implement the regulation (UCPMP 2024) on pharmaceutical marketing
- Allocate budgets for diagnostic (culture and sensitivity) facilities

AM practices – clinics and nursing homes

- Remove the exemption under Schedule K to stock drugs by doctors in their clinic
- Explore accreditation of all health clinics
- Make prescription audits of antimicrobials compulsory
- Make AMR/AMC/AMU monitoring and AMSP mandatory in all health facilities
- Explore digital solutions for monitoring and sharing information with authorities
- Develop IEC for patients and physicians regarding AMR and importance of definite diagnosis.
- Develop and implement teaching curriculum and mandate regular CME hours for AMR.
- Mandatory AMSP in all health facilities and clinics.

Monitoring

- Develop digital solutions to monitor antimicrobial consumption/use
- Develop aggressive and comprehensive AMR awareness and IEC campaigns
- Educate prescribers and introduce reward/recognition system for good practices
- Train the pharmacists on ATC/DDD tools to monitor AMC
- Appoint dedicated human resources for monitoring AMC/AMU
- Strengthen IT infrastructure for monitoring AMC/AMU
- Constitution of AMSP committee should be made mandatory in all hospitals
- Expand NAC-NET sites to monitor AMC and AMU
- Integrate AMC and AMU monitoring with hospital/laboratory information systems.
- Training in the monitoring of the consumption and use of antimicrobials in health care facility.



Key recommendations and way forward

The information sharing, discussions and cross learning between different stakeholders from various States/UTs during the consultation have identified key action points during the group work. The following recommendations have been prioritized for action.

Comprehensive data on manufacture, sale, distribution, consumption and use of antimicrobials is needed to monitor antimicrobial stewardship interventions at various levels. Therefore, a national level database to monitor the production, consumption and use of antimicrobials at various levels through an online portal will ensure the tracking of antimicrobials across the supply chain from source to patient, and this could be a common portal for all drugs, starting with antimicrobials.

Despite huge improvements, quality of antimicrobials remains a concern, since substandard and falsified antimicrobials may lead to sub-therapeutic dosing which aid the development of AMR. A focused biannual sampling drive will help to monitor the quality of antimicrobials and taking decisive action to eliminate the supply of sub-standard drugs in the market.

Raising awareness of prescribers, patients and dispensers is essential to guide behaviour change and prevent over-the-counter sale and misuse of antimicrobials. Strong messages on the packaging of antimicrobials may be helpful in reducing this. Since the Red line campaign has not had the impact that was anticipated, ensuring a single colour for antimicrobial packaging such as blue may make the messaging simple and more effective.

Absence of disposal systems for unused and expired drugs leads to improper disposal along with household waste leading to environmental contamination which is a potential risk for emergence of AMR. It is important to establish drug take-back initiatives such as the PROUD program in Kerala, with standard protocols for handling, collection and disposal of drugs. De-blistering of tablets/capsules followed by disposal at common collection points with linkages to biomedical waste treatment establishments, may be useful in implementing this in programme mode.

Antimicrobial stewardship in hospitals entails a number of activities, some of which may be prioritized – like updating of hospital formularies, developing hospital antibiotic policy, establishing functional hospital AMSP committees, establishing linkages with trained professionals/committees for smaller health facilities/clinics to implement AMS, as well as developing/implementing standard treatment guidelines. Similar initiatives are also needed in clinics and nursing homes. Additionally, Schedule K exemption for stocking drugs by doctors may be reviewed and revised.

Monitoring of AMC at the national, state and institution level and monitoring of AMU at institutional level are important. Expansion of the NAC-NET to include more sentinel sites will help to monitor AMC and AMU. Development of digital solutions to monitor antimicrobial prescriptions, AMC and AMU are important next steps.

Concerted efforts are needed across departments – including regulators, prescribers and dispensers – at all levels of the health system. The consultation helped identify effective and actionable strategies for key stakeholders. The identified strategies are expected to be included/integrated with the NAP AMR's implementation and monitoring framework by relevant stakeholders.

Annexure I – Programme

2 May 2024 (Thursday)		
09:00 – 09:45	Registration	
09:45 – 11:15	<i>Opening session</i>	
09:45 – 09:50	Welcome	Dr Lata Kapoor, NCDC
09:50 – 10:00	Address	Dr RV Asokan, IMA President
10:00 – 10:10	Address	Dr Rajeev Singh Raghuvanshi, DCGI
10:10 – 10:20	Address	Dr Roderico H Ofrin, WR India
10:20 – 10:35	Address	Prof (Dr) Atul Goel, DGHS & Director NCDC
10:35 – 10:55	Keynote address	Dr Vinod Paul, Member (Health) NITI Aayog
10:55 – 11:00	Vote of thanks	Dr Anuj Sharma, WHO
11:00 – 11:30	Group photograph followed by tea/coffee	
11:30 – 13:15	<i>Technical session 1</i>	
11:30 – 11:45	Surveillance of antimicrobial use in NAC-NET	Dr Arti Bahl, NCDC
11:45 – 12:00	ICMR's initiatives for optimizing AMU	Dr Kamini Walia, ICMR
12:00 – 12:15	Global and WHO recommendations to optimize antimicrobial use	Dr Anuj Sharma, WHO
12:15 – 12:30	Indian Drug and Cosmetic Rules regulating antimicrobial use	Dr Swati Srivastava, CDSCO
12:30 – 12:45	Best practices for optimizing AMU in Kerala	Dr KV Nandhakumar, ADHS
12:45 – 13:00	Best practices for optimizing AMU in Madhya Pradesh	Dr Sagar Khadanga, AIIMS-B
13:00 – 13:15	Best practices for optimizing AMU in Delhi	Dr Sangeeta Sharma, Delhi
13:15 – 14:15	Lunch	
14:15 – 17:00	<i>Group work 1 – regulating the availability, and access of antimicrobials</i>	
14:15 – 14:30	Introduction to group work	Ms Sehr Brar, WHO
14:30 – 16:00	<i>Group work 1 – Regulating availability/access of antimicrobials</i>	All participants
16:00 – 16:30	Tea/coffee	
16:30 – 17:30	<i>Group work 1 presentations</i> Chairpersons: Dr Swati Srivastava and Dr HG Koshia	Rapporteurs

3 May 2024 (Friday)		
09:30 – 09:45	Recap of day 1	Ms Sehr Brar, WHO
09:45 – 11:15	<i>Technical session 2</i>	
09:45 – 10:00	AMR containment in India	Dr Lata Kapoor, NCDC
10:00 – 10:15	IMA initiatives to optimise antimicrobial use	Dr Narendra Saini, IMA
10:15 – 10:30	Best practices for antimicrobial use in oro-dental infections	Dr Vijay Mathur, AIIMS-D
10:30 – 10:45	Best practices to optimize AMU at ABVIMS/RMLH	Dr Desh Deepak, RMLH
10:45 – 11:00	Best practices to optimize AMU at GMC Aurangabad	Dr Jyoti Iravane, GMC-A
11:00 – 11:15	Best practices to optimize AMU at CMC Vellore	Dr Prasannakumar, CMC
11:15 – 11:45	Tea/coffee	
11:45 – 15:30	<i>Group work 2 – Optimizing antimicrobial use in hospitals, clinics and nursing homes</i>	
11:45 – 12:30	Introduction to group work 2	Dr Anuj Sharma, WHO
12:30 – 13:30	<i>Group work 2 – Optimizing AMU in hospitals, clinics & nursing homes</i>	All participants
13:30 – 14:30	Lunch	
14:30 – 15:30	<i>Group work 2 presentations</i> Chairpersons: Dr Mahesh Varma and Dr Ravindra Aggarwal	Rapporteurs
15:30– 16:00	Tea/coffee	
16:00 – 17:00	<i>Closing session</i>	
16:00 – 17:00	<i>Summary of proceedings</i> Dr Mahesh Varma, Dr Ravindra Aggarwal, Dr Swati Srivastava, Dr Lata Kapoor and Dr Anuj Sharma	Chairs of group work presentations

Annexure II – List of participants

Dignitaries

Dr Vinod Kumar Paul, Member Health, NITI Aayog
Prof (Dr) Atul Goel, DGHS and Director NCDC, Ministry of Health and Family Welfare
Dr Roderico H Ofrin, WHO Representative to India
Dr Rajeev Singh Raghuvanshi, Drugs Controller General of India, CDSCO
Dr RV Asokan, President, Indian Medical Association
Dr Mahesh Verma, Chairman, National Accreditation Board for Hospitals & Healthcare Providers

Drug regulators

Ms Swati Srivastava, Deputy Drugs Controller (India), CDSCO
Mr M Panduranga Prasad, Joint Director, Drugs Control Department Andhra Pradesh
Mr Biswajit Talukdar, Drugs Controller (I/C), Drugs Control Administration, Assam
Mr Basant Kumar Kaushik, State Drug Regulator, Drugs Control Department Chhattisgarh
Smt Jyoti J Sardesai, State Drug Regulator, Drugs Control Department Goa
Dr HG Koshia, State Drug Regulator, Drugs Control Department Gujarat
Mr Manmohan Taneja, State Drug Regulator, Drugs Control Department Haryana
Mrs Ritu Sahay, State Drug Regulator, Drugs Control Department Jharkhand
Dr Bhaskaran J, Drug Controller, Drugs Control Department, Karnataka
Mr DR Gahane, Drug Controller, Drugs Control Department Maharashtra
Mr Ronen Singh, State Drug Inspector, Drugs Control Department Manipur
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