Antimicrobial resistance

Antimicrobial resistance (AMR) endangers human health and the future of healthcare delivery and is considered one of the biggest threats to global health and human development. Many recent achievements in global health and development are challenged by AMR, including: progress towards universal health coverage; building strong and resilient health systems; reduction of illness and death from infectious diseases; quality, safe, and efficacious medicines; and hygiene, safe water, and sanitation.[1]

In all areas of the world, bacteria, parasites, viruses and fungi are becoming increasingly resistant to antimicrobial medicines. As a result, antimicrobials become ineffective and infections persist in the body, increasing the risk of spread to other people and populations. AMR naturally occurs over time, but is accelerated as a result of several factors, mainly the misuse and overuse of antimicrobials in humans and animals. The spread of resistant pathogens is facilitated by population growth, changes in susceptible populations, urbanization with overcrowding, environmental changes, wars and societal disruption, poor infection control, hygiene and sanitation, changes in the food industry and increased global trade and travel.[2] New resistance mechanisms are emerging at an alarming rate in pathogens that cause common healthcare-associated and community-acquired infections (i.e. *E. coli, K. pneumoniae, S. aureus, E. faecium, A. baumannii, P. aeruginosa*) and in serious infections such as tuberculosis, malaria, and HIV.

Resistance to all classes of antimicrobials will lead to few options available to treat both common and serious infections and “last-resort” antimicrobials are often more toxic, more expensive and less effective. The consequences of AMR include prolonged illness, the need for longer and more intensive care, increased morbidity, preventable deaths, spread of resistant microorganisms, and high healthcare costs.[3] Medical procedures such as chemotherapy and surgery will become very high risk without effective antimicrobial medicines.

Nurses and other healthcare workers have a vital role to play in preserving the power of antimicrobial medicines. Nurses play a central role in patient care and interdisciplinary communication and, as such, are in a key position to contribute to reducing AMR and critical for the function of antimicrobial stewardship programmes (ASP). Nurses assess and diagnose infections; administer and may prescribe antimicrobials; monitor treatment outcomes and report side effects; provide vaccination; and educate patients, their families and communities.[4]

ICN Position and Recommendations

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The International Council of Nurses (ICN) is very concerned with the increasing global levels of AMR and recognises the urgent need for multisectoral collaborative actions to halt the rise and prevent further development of AMR.[5]

As the global voice of nursing, ICN:

- Strongly supports the United Nations resolution adopting the political declaration of the high-level meeting of the General Assembly on antimicrobial resistance, including the commitment to work at national, regional, and global levels to develop multisectoral national action plans, programmes, and policy initiatives.[1]
- Believes that individuals, families, communities and the health of populations must be central to actions aimed at preventing and eliminating AMR.
- Calls for comprehensive, coordinated and sustained efforts in reducing global AMR through with the full collaboration of nurses, consumers, physicians, pharmacists, microbiologists and veterinarians as well as the environmental and agricultural sectors.
- Fully supports the leadership role of nurses in activities to combat AMR, including participation in the development of evidence-based ASPs in healthcare facilities, leading infection prevention and control (IPC) teams and initiatives, and supporting the multidisciplinary team to apply IPC principles and best practices.[6]
- Urges all members of the multidisciplinary team involved in ASPs to recognise the existing role of nurses in these programmes in order for the nursing role to be fully acknowledged in ASP guidelines.

ICN encourages national nurses' associations (NNAs), in collaboration with their respective government, to:

- Promote awareness and disseminate information to improve public understanding of AMR and the implications it has on human health and development.
- Ensure nurses and nursing organisations are part of the development and implementation of national action plans for preventing AMR.
- Lobby to eliminate the non-prudent use of antimicrobial agents in food-animal production, plant agriculture, and industrial settings and to develop national guidelines on use in these areas according to internationally recognized standards.[7]
- Lobby governments to develop and strengthen national AMR surveillance systems to monitor the extent and cause of resistance in order to support evidence-based decision-making and inform the development of new drugs

  and diagnostics. Ensure nurses play a central role in surveillance, monitoring and audit activities.

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- Advocate for improved access and dispensing of essential antimicrobials and vaccines for populations with poor or inadequate supply.
- Collaborate with education providers to include education about IPC and AMR, including antimicrobial stewardship, in the core curricula of pre- and post-registration education.[8]
- Support nurses specialising in IPC through promoting ensuring national standards of practice and by supporting professional development in this area.
- Lobby governments for regulation to ensure that only quality assured, safe, efficacious, and affordable antimicrobial agents are licensed, distributed, and sold.

ICN calls on individual nurses in their role as clinicians, educators, researchers, policy influencers, or executives, to:

- Recognise that antimicrobial stewardship activities are already integrated into daily practice and that these activities are integral to supporting ASPs.[8]
- Educate patients and their families about the determinants of AMR and the measures to prevent it, such as adherence to treatment, the appropriate use of antimicrobials and infection prevention.
- Work with the multidisciplinary team to ensure the appropriate use of antimicrobials including selection, dose, duration, administration and therapeutic outcomes.
- In healthcare settings, support and strengthen IPC policies and practices to prevent and control healthcare-associated infections; educate patients and families about how to prevent infections in their homes and communities.
- Improve vaccination rates as a mean to reduce the risk of AMR – provide patients and families with evidence-based, accurate and non-judgmental information on the benefits and importance of immunisation for health outcomes.
- When prescribing antimicrobials, follow national prescribing guidelines on the most appropriate drug, the shortest effective dose and the most appropriate route of administration.

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