

The Open Microbiology Journal

Content list available at: https://openmicrobiologyjournal.com



LETTER'VQ'GF KVQT

National Action Plan for Antimicrobial Resistance in Nepal: Possibility of Translating Idea into Reality

Krishna Prasad Acharya^{1,2,*}

DEAR EDITOR,

Antimicrobial Resistance (AMR) is increasingly a serious public health threat around the world. The WHO speculated the possible casualty to be around 10 million per year by 2050 A.D associated with AMR [1]. A global action plan has been formulated by the WHO to tackle AMR in its 68th World Health Assembly considering the magnitude of its effect to the global public health [2]. All the member states of the WHO have signed and endorsed that action plan. Mr. Khagaraj Adhikari, Minister for Health and population of the Government of Nepal at that time (2015) signed that commitment. With the aim to move towards the vision of the WHO, the Government of Nepal (GON) had formed a multidisciplinary core committee and it has already identified the existing situation of AMR in Nepal, which has now finally appeared in form of policy document as "National Action Plan for Containment of Antimicrobial resistance in 2016" [3, 4]. Recently, the joint external evaluation has prioritized the "need for strengthening laboratory services in Nepal after thorough evaluation of the laboratory services, and policy regulations related to AMR [3, 5]. The national antibiotic resistance surveillance program has been conducted with the support of Flemming fund involving 12 human health and 4 animal health laboratories. The National Public Health Laboratories (NPHL) and Central Veterinary Laboratory (CVL) are the custodian of AMR surveillance in human and animal health sectors, respectively [6]. Though the national plan envisions a rigorous and nationwide surveillance of AMR, it is not being prioritized by the Government of Nepal while developing the action plans owing to the lack of adequate/sufficient resources allocated for surveillance [7, 8]. Still, some surveillance has been carried out so far with the aid of foreign agencies like GARP (Global Antibiotic Resistance Partnership) [9, 10], Fleming fund [7] which are at very low scale and is not sufficient published

literature has warned that Nepal is not prepared to detect, prevent, and respond AMR on time [7, 8, 11] that could have a devastating effect on public health and national economy of the country.

In 2015, GARP-Nepal published a report on the situation of AMR in Nepal, and identified some issues like irrational use of the antimicrobial compounds, over the counter availability of these compounds, poor laboratory and diagnostic facilities, lack of appropriate surveillance system shortage of professional expert on AMR, and use of antibiotics as growth promoter in the animal feed contributing in the recent rise of AMR in Nepal [7, 9, 10, 12]. Moreover, AMR have not been prioritized by the political parties, GoN and other concerned stakeholders [7]. Despite all these situations, some initial works have been initiated to strengthen and upgrade existing laboratories in Nepal. Still more opportunities are there, to improve antimicrobial resistance surveillance by upgrading the existing laboratories and diagnostic facilities in Nepal. GoN should direct its effort to comprehensively deal with issues and challenges associated with AMR surveillance, and to strengthen the surveillance system for the containment of AMR.

REFERENCES

- de Kraker MEA, Stewardson AJ, Harbarth S. Will 10 million people die a year due to antimicrobial resistance by 2050? PLoS Med 2016; 13(11): e1002184.
 - [http://dx.doi.org/10.1371/journal.pmed.1002184] [PMID: 27898664]WHO. Global action plan on antimicrobial resistance. 2017; pp. 1-28.
- [3] MoH. National antimicrobial resistance containment action plan Nepal. 2016; 2016: pp. 1-24. Available from: https://www. flemingfund.org/wp-content/uploads/3d9bf4b7ab190c600921a 99cf1803059.pdf
- [4] WHO. Resource mobilisation for antimicrobial resistance (AMR): Getting AMR into plans and budgets of government and development partners Nepal country level report 2018; 1-34. Available from: https://www.who.int/antimicrobial-resistance/national-action-plans/Nepal-AMR-integration-Report-WHO-Sept-2018.pdf
- [5] OIE. PVS gap analysis report-Nepal. 2011. Available from: http://www.fao.org/tempref/AG/Reserved/PVS/GAP/Asia/GAP%20-%20Nepal%202011.pdf

¹Animal Quarantine Office (AQO), Budhanilakantha, Kathmandu, Nepal

²Ministry of Land Management, Agriculture and Co-operatives (MoLMAC), Gandaki Province, Pokhara, Nepal

^{*} Address correspondence to this author at the Animal Quarantine Office (AQO), Budhanilakantha, Kathmandu, Nepal; Tel: 977-1-4377153; E-mail: krishna.acharya@nepal.gov.np and kriaasedu@gmail.com

- [6] Gelband H, Delahoy H. Policies to address antibiotic resistance in lowand middle-income countries: National and international action on antimicrobial resistance. The Center for Disease Dynamics, Economics, and Policy 2014; 1-36.
- [7] Acharya KP, Wilson RT. Antimicrobial resistance in Nepal: A review. Front Med 2019; 6: 105.[http://dx.doi.org/10.3389/fmed.2019.00105]
- [8] Dahal RH, Chaudhary DK. Microbial infections and antimicrobial resistance in nepal: Current trends and recommendations. Open Microbiol J 2018; 12: 230-42. [http://dx.doi.org/10.2174/1874285801812010230] [PMID: 30197696]
- [9] Basnyat B, Pokharel PK, Mani Dixit S, et al. GARP-Nepal national working group (nwg) garp-nepal staff, nepal public heal found. 2014;

- pp. 1-20. Available from: $\label{eq:https://cddep.org/wp-content/uploads/2017/06/garp_nepal_sitan_execs um-1.pdf} \label{eq:https://cddep.org/wp-content/uploads/2017/06/garp_nepal_sitan_execs um-1.pdf}$
- [10] Dynamics M, Microbiologist M, Project T, Clinics V, Council P. GARP-Nepal Staff. n.d.
- [11] Ashley E, Recht J, Chua A. Antimicrobial resistance in low and middle income countries an analysis of surveillance networks and educational resources. 2017; pp. 1-140.
- [12] Basnyat B, Pokharel P, Dixit S, Giri S. Antibiotic use, its resistance in Nepal and recommendations for action: A situation analysis Global Abtibiotic Resistance Partnership (GARP)-Nepal. J Nepal Health Res Counc 2015; 13(30): 102-11. [PMID: 26744193]

© 2019 Krishna Prasad Acharya.

This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International Public License (CC-BY 4.0), a copy of which is available at: (https://creativecommons.org/licenses/by/4.0/legalcode). This license permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.