

2-7 The role of regional health organisations to tackle antimicrobial resistance

[00:00:16.35] My name is Marcelo Galas. I am technical officer for antimicrobial resistance surveillance, at Pan American Health Organisation, at PAHO, at the regional level. My role is to coordinate the surveillance at regional level and to help the countries in building capacities for AMR, or Antimicrobial Resistance, diagnosis surveillance and characterization of mechanisms of resistance, emerging mechanisms of resistance.

[00:00:47.46] The role of Pan American Health Organisation in this region is coordinate the surveillance and elaborate strategies to obtain data to promote interventions in the countries, to control the problem of AMR. The surveillance is done in the region for the clinical laboratories at country level, and the elaborate surveillance network that we have is a network of network. Each country have a network, and they produce data for use at local level, national level, regional level, and global level. In the case of regional level, that is the role of the Pan American Health Organisation is assess the regional AMR trends and burden of disease for AMR guide technical cooperations to countries, to improve the control of the AMR and prioritise regional strategies and advocate and resource mobilisation for the countries to face the problem of AMR.

[00:02:09.29] The importance to have a network in the region is to improve the interaction in the countries to promote the quality in the surveillance. We have external quality assurance programmes to improve the quality of the data retention in the countries and also to incentivize the source collaboration, that is it means collaboration in between countries. Something that is very important in this region, in the Americas, is the help that the countries are giving in between them. The more advanced countries help the countries that have more needs in all the subjects that are related with AMR. This is something that is important for us, because they make the situation a little more equity or give more equity to the activities in the region.

[00:03:20.36] My name is Roberto Melano. I am a technical officer in the antimicrobial resistance special programme, in the Pan American Health Organisation, in Washington DC. My role in the group is to advise in terms of molecular equipment and methodologies that the countries for the national reference labs can use for characterization of antimicrobial resistance mechanisms. And in that regard, the genomics is playing a role not just in microbiology but biology in general by talking about antimicrobial resistance.

[00:04:12.48] As Marcelo mentioned before, we are supporting a network, regional network, that is getting a lot of information, phenotypic information, or information that is related to the level of resistance that these bacteria in the region are acquiring or getting. And using genomics, we have the opportunity to get more details about the mechanisms that are conferring resistance to this pathogen.

[00:04:57.44] One of the good things that the pandemic brought to the region is that the countries got several different equipment, molecular equipment, for characterization of SARS-CoV-2. But now those equipment can be repurposed for different, other emergent pathogens. And between them, we have the antimicrobial resistance in bacteria and fungi that are getting more importance since considering the fact that we are getting less antibiotics for treatment of these bacteria.

[00:05:52.24] Very recently, there was a session of the executive committee in the Pan American Health Organisation to discuss the strategy on regional genomic surveillance for epidemic and pandemic preparedness and response. And all the ministries of health that were in that session agreed to use genomics for the study as a tool, molecular tool, for the study of different pathogens that are emerging in the region or in the world.

[00:06:37.74] Between them, the antimicrobial resistance is one of the focal points for the region. Then, the introduction of this methodology in the surveillance of antimicrobial resistance is key to characterise not just the mechanism, but also the dissemination of these pathogens between the countries in the region.

[00:07:13.94] In the case of PAHO, PAHO is working in applied the global action plans to control AMR that was assigned by the countries in their meetings, in the executive committee of the World Health Organisation. And these have a mirror in a resolution here in the region that is the regional action plan for control of AMR, and there are several national action plans that are working to control AMR. All the activities of PAHO that we are doing from the special programme of AMR, here at PAHO Washington DC, are related with the phase in this or accomplish this plan, this regional plan, for control of AMR.

[00:08:12.05] Surveillance is one of the objectives. It's the objective two. There are other four objectives that are awareness, prevention, appropriate use of AMR, and sustainability. But the number two, the objective number two, is related with surveillance. And this is our mandate at regional level, and we are working with the countries to accomplish this mandate and along the region.

[00:08:46.89] From the Pan American Health Organisation, in Washington, we are coordinating the integration of genomics in the national reference labs that have the tools to increase the possibilities of surveillance in those countries. But also, we are trying to enhance the cooperation between countries in the region, in the way that if one country doesn't have the possibility of sequencing genomes of pathogens that are emerging in that particular country, another country of the region that has the possibility can do it, and we are trying to improve that collaboration.

[00:09:36.99] We are trying to improve the implementation of this methodology in all the countries that have the equipment, but we are going step by step, trying to improve the possibilities of each national reference lab in doing this type of studies. And I think that it's very important that the cooperation between the countries, because that is giving a bigger or a stronger response in the region, when pathogens emerge in one country or in another.

[00:10:31.20] One of the strategies of the World Health Organisation and the Pan American Health Organisation for the study of antimicrobial resistance is from the One Health point of view. That implies that resistance will come from not just from the human clinical environment, but also from the food production and also from the environment, per se.

[00:11:04.58] One of the strategies of the Pan American Health Organisation for the study of antimicrobial resistance is from the One Health point of view, and in that regard the improvement of the quality of the result using genomics improves the link between environment, human clinical pathogens, and food production. And we can trace when a pathogen is coming from one of the other fields. Then, genomics is fundamental in this way

that is giving all the detail that we need to characterise the emergence of pathogens in any of the fields, environment, clinical, or food production.