

An institutional intervention: Drugs Resistant Infections. A Gender Perspective.

María del Pilar Hernández
Stefani Guadalupe Campos Recinos
Clinical Trials Unit
Sanitary Regulatory Superintendency
revista@srs.gob.sv

Current Topic

Received:
October 18, 2024

Accepted:
November 15, 2024

Published:
August 15, 2025

Abstract

Drug resistant infections are produced when pathogens such as bacteria, virus, fungi and parasites change with time in physical and genetic structure which makes treatment difficult, increasing the proliferation, complications and death. Thus, drugs which are usually the go-to would become inefficient to eliminate said infections. With the aforementioned and the strategy from the World Health Organization (WHO), known as ONE HEALTH, where the community's education is detailed within its strategies, making it of vital importance to educate, comprehend and analyze the microenvironment and each person's macroenvironment in relation to each determinant corresponding to healthcare, considering our culture, education level, gender among other determining factors since the priorities usually vary according to the previous change. In the Sanitary Regulatory Superintendency (SRS), as a National Regulatory Agency (NRA) in El Salvador, it is our duty not only to educate the consumers but also our peers, resulting in events at an institutional level considering the most concerning needs identified, this way, the personnel would feel seen since the topics are part of their day-to-day aiming to changes in lifestyle and environment and to replicate it to the rest of their community.

Key words: Gender, Antimicrobial Resistance, AMR, Drug Resistant Infections, DRI

Introduction

Gender's impact in the battle against the Antimicrobial Resistance (AMR) has great extent, and there are many strategies that can be executed in compliance with public healthcare responsibilities. This stepping in, from a gender's perspective, would reveal how the role women and men perform in society, considering the physiological and cultural differences, impacts the increased risk to acquiring Drug-Resistant Infections (DRI). To convey this message implies two challenges, first relay the world wide urgency of antimicrobial resistance and second, relay how gender plays a fundamental role in this. Due to those factors it was necessary to find the best way to convey this message.

The report published by the Wellcome Trust, Reframing Resistance. How to communicate about antimicrobial resistance effectively (Wellcome Trust, 2019), being a research result made in different phases: documental investigation, means analysis, interviews to experts and doctors involved in the Antimicrobial Resistance communication as well as testing the messages to the public aiming to define the best way to deliver the Antimicrobial Resistance matter outside of a scientific environment.

The last phase in this research, made by Wellcome Trust, reached seven countries: United Kingdom, United States of America, Germany, Japan, India, Thailand and Kenya. These were selected aiming for several perspectives on the topic ensuring to include representative and compelling countries from the north and south hemispheres. The quantitative analysis in this research included 12,169 volunteers with representative samples from each of the seven countries.

The results obtained in this research establish five principles to raise awareness about antimicrobial resistance

1. To state antimicrobial resistance is detrimental to modern medicine.
2. To explain the foundation briefly, succinctly and concisely.
3. To emphasize this is a universal matter. It can affect anyone including oneself.
4. To focus on the "here and now".
5. To promote immediate action.

For this intervention two principles are highlighted: **the second one** that states scientific jargon and explanations must be avoided since the messages should be clear, succinct and easy to understand. It is said that the most popular terms within the English speaking media are: super bacteria, drug resistance, antimicrobial resistance, drug resistant infections, antimicrobial resistant bacteria and AMR.

Considering that jargon and unknown names must be avoided, the terms "antimicrobial", "resistance" and "AMR" are problematic from a communicative perspective. The research showed the word "microbe" and the term "resistance" although scientifically accurate, were not understood by most public audience which makes it advisable to avoid them out of scientific conversations (Wellcome Trust, 2019).

The document also highlights that the role of "infections" is important given the amount of people assuming the resistance is human, in other words, it is understood that who resists is the person and not the bacteria. In consequence, it is recommended to use "resistant infections" instead of an isolated "resistance". For example, the terms "drug resistant infections" and "antimicrobial resistant infections" have a more accurate emphasis (Wellcome Trust, 2019) It is mentioned that the sole word "infection" could be less useful since it may suggest a general phenomenon instead of a solid healthcare concern that describes "infections".

The phrases related to "antimicrobial resistant bacteria" are potentially useful although the term "bacteria" is not clearly perceived as harmful compared to the term "infection" due to the knowledge that not all bacteria are harmful as is the case of intestinal flora (gut microbiota). Thus, "antimicrobial resistance" itself is not as

useful and it is recommended to avoid it.

The fifth principle: to promote immediate action, says that antimicrobial resistance must be stated as solvable to elicit engagement since understanding what could be done about a problem, in the moment, is motivating. It also explains that stating an uncontrollable situation or with a sealed fate the motivation for change could disappear. Therefore, a strategy was designed to intervene where each of the subjects felt compelled, if not directly, at least indirectly. This way, each subject, within their workplace or at a community level would commit to make small changes in their daily routine and have an impact on those who surround him/her. Here is where the perspective of this intervention is introduced: gender.

Accordingly, for this intervention, gender was defined as those characteristics and societal roles for men, women, children and teenagers (Gautron, 2023). It was considered that through this perspective the laymen, being the individual or the community, since it will bring to the spotlight those responsibilities construed by the society placing the subjects under different risk levels to acquire a drug resistant infection or in contact with resistant or antimicrobial resistant pathogens.

The different sexes and genders experience different risk levels when acquiring infections, including drug resistant infections; also, they have different behaviors when looking for healthcare hence determining their probabilities to acquire antimicrobials and using and administering them properly (Tien, 2020).

This research made by the articles' authors about gender's intersectionality and antimicrobial resistance (Gautron, 2023), frames the risk of exposure to resistant pathogens, based on gender, in seven cases: WASH (Water, Sanitation and Hygiene), animal husbandry, sexual behavior, malnourishment, food handling and preparation, prescription administration and usage of antimicrobials in human healthcare and Frontline healthcare professionals. This article will bring to light the situation in different latitudes in which culture overpowers health, increasing the risk of drug resistant infections in women making this the foundation for the "Action Plan against Antimicrobial Resistance"

This intervention has a dual nature, for one, to raise awareness about antimicrobial infections in simple words, and on the other hand, once its magnitude is ascertained, to exhibit the increased risks of acquiring a drug resistant infection due to gender.

Methodology

The plan had a three-arm parallel design in two phases lasting six months total. The first phase was made, first, by internal activities to involve the personnel in the institution and second external guests such as the heads or representatives of other institutions participated. All this was preceded by an awareness campaign that generated expectations.

The third arm consisted of the creation in the institutions' intranet that designed an interactive game to help fight resistant bacteria and a space where antimicrobial resistant information would be published to interact with the personnel, all of these included promotionals of the event. The second phase focuses on a more external activity, posting banners designed for the event among social media and the preparation for the Awareness Week 2024 from the 18th to the 24th of November 2024. This plan was developed under the Quality Management System which was made by the corresponding unit and signed by the Executive Management. This is an important step since the institution's engagement to execute the project is sealed.

Pre Campaign

Before the pre campaign different activities were designed. It was established that during four weeks two types of activities would be held: a discussion forum with special guests and stands denoting the topics to the internal personnel. The topic was divided on four parts, one per week: (1) DRI, GENDER AND WASH, access to tap water, sanitation and hygiene; (2) DRI, GENDER AND HYGIENE, menstrual hygiene, pregnancy and children, hygiene in the elderly and husbandry; (3) DRI, GENDER AND HABITS, sexual behavior, malnourishment, food handling and preparation; (4) DRI, GENDER AND HEALTHCARE PROVIDERS, prescription, administration and usage of antimicrobials in human and veterinary healthcare, personal protective equipment, and occupational health. In all forums a relation with the concept of gender was established and a member from the Environmental and Energy Efficiency Management Committee to include the impact from an environmental perspective.

The expectation campaign consisted of two surveys previous to the event's inauguration which were sent through email to all the personnel in the former National Directorate of Medicines currently known as Sanitary Regulatory Superintendency.

The first survey included three questions that could be answered in 30 seconds:

(1) Profession: in which four categories were made: a) caretakers (cleaning personnel, drivers, maintenance personnel or related professionals), b) administrative healthcare personnel (without contact with patients in hospitals, clinics, among other facilities), c) healthcare personnel in contact with patients and d) other professionals (administrators, lawyers, architects, engineers, etc.).

(2) To organize by priority the following problems being the first one the most vital and the last one the least critical: a) tap water scarcity, b) food contamination, c) drug resistant infections, d) sexually transmitted diseases.

(3) Sex: a) masculine; b) feminine. The idea was to know the risk perspective when acquiring a drug resistant disease according to the role that they perform and the sex. The second survey consisted of describing in one word How does it feel knowing there are infections around us that had a cure before and now they do not?

Besides this poll, four banners were shared through email (see figures 2, 3, 4 and 5) designed to represent the four topics to be developed along the four weeks.

Figure 2. Healthcare and occupational safety banner.
In the figure: Take care of yourself, use personal protective equipment correctly



Credits: Norma Avilés del Cid

Figure 3. Elderly care banner.
In the figure: Care for them as they cared for you.



Credits: Norma Avilés del Cid

Figure 4. Menstrual hygiene banner
In the figure: Take care of your menstrual hygiene



Credits: Norma Avilés del Cid

Figure 5. Veterinarian prescribed drugs
In the figure: Take care of them, regularly clean your pets' utensils.



Credits:: Norma Avilés del Cid

Campaign

During four weeks topics from the forums were extensively discussed and during the afternoons the stands complemented the information performing interactive activities to internalize the topics. Additionally, during and after the event the interactive game DRI GAMES (see figure 6) with questions about the discussed topics to reinforce their knowledge. Also, information about the event was posted on the Authorities' social media accounts.

Antimicrobial Resistance Awareness Week

This event was developed on the 21st and 22nd of November 2024. The first day was more interactive, granting two lectures, a forum with the National Commission about Antimicrobial Resistance in El Salvador (CONARAM by its acronym in Spanish) and a workshop about vaccines. Meanwhile, the second day more lectures were held, adding veterinary drugs and food from the perspective of the now transformed Sanitary Regulatory Superintendency. Also, there was the opportunity to discuss the plan's results in a forum finalizing with a panel on self-care and self-medication.

Indicators

To measure the intervention's impact four indicators were chosen in phase 1 (Faster Capital, 2024):

- Scope: intranet's visitors flow (150 people foreseen), attendants to the forums (200 people foreseen)
- Engagement: number of people in favor of the gallery (100 expected) number of actions in the event (15 people expected), number of comments (50 expected);
- Conversion rate: number of people that participated in the activities (100 people);
- Brand feeling: positive and negative comments about the campaign (60% positive)

While in phase 2, these four indicators were picked (Faster Capital, 2024):

- Scope: material visualizations (800 foreseen), increased flow of followers on social media (50 foreseen);
- Engagement: "likes" (50 foreseen), "shared" (30 foreseen) and comments (50 foreseen)
- Brand feelings: positive or negative comments (60% positive)
- Media exposure: appearances in the media (2 foreseen)

Figure 6. DRI Games Cover.
In the figure: War Against Antimicrobials. Start



Credits: Norma Avilés del Cid

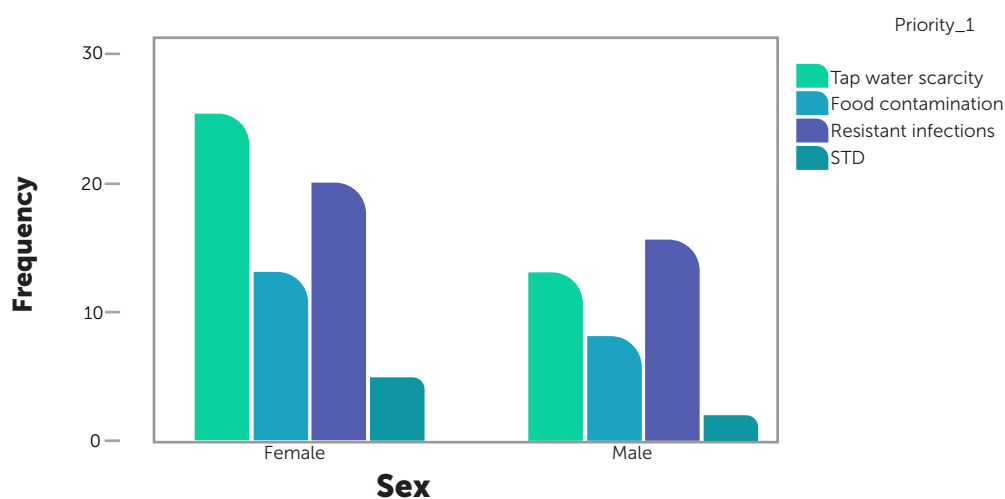
Results

Pre Campaign

The first poll had an 88% participation rate from the DNM personnel. Most employees belong to the category "other professionals" followed by healthcare professionals with administrative duties, caretakers and in a lower number the healthcare professionals in contact with patients. The first health concern for female employees from the administrative area was tap water scarcity while for male employees it was drug resistant infections; for healthcare employees in contact with patients it had an even distribution, half of female employees chose tap water scarcity and for the second half it was resistant infections. The same happened with the male personnel, the caretakers chose as a healthcare priority food contamination, whereas female employees prioritizes tap water scarcity; lastly, the "other professionals" category, they sorted healthcare concerns in the same order according to the sex, placing tap water scarcity first and in third place drug resistant infections (see graphs 1a, 1b, 1c, 1d). In the second poll, there was an 80% participation rate from DNM employees where the most repeated words were: CONCERN, FEAR and UNCERTAINTY(see figure 1).

Graph 1A. Health priority 1 by profession and sex.

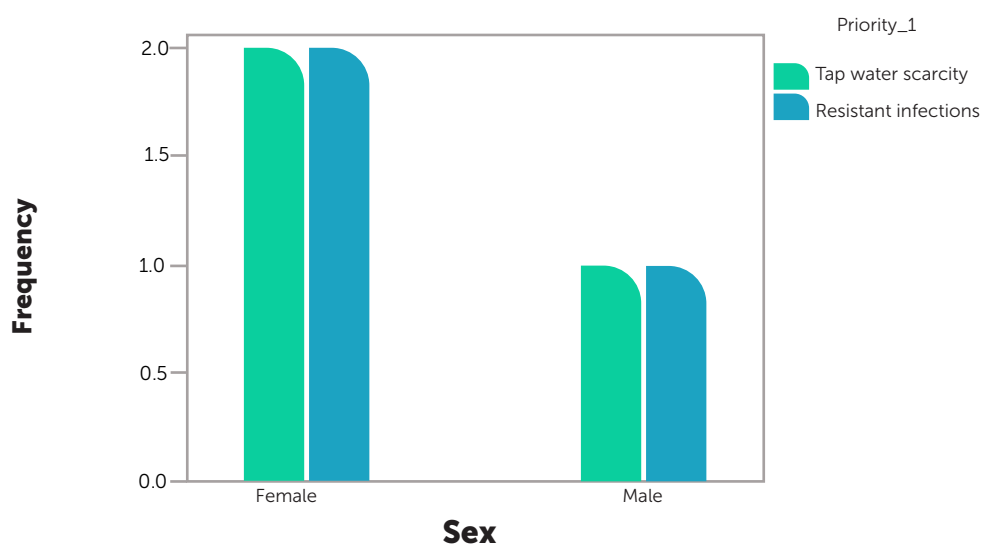
Occupation = Administrative healthcare personnel (without contact with patients)



Source: self made

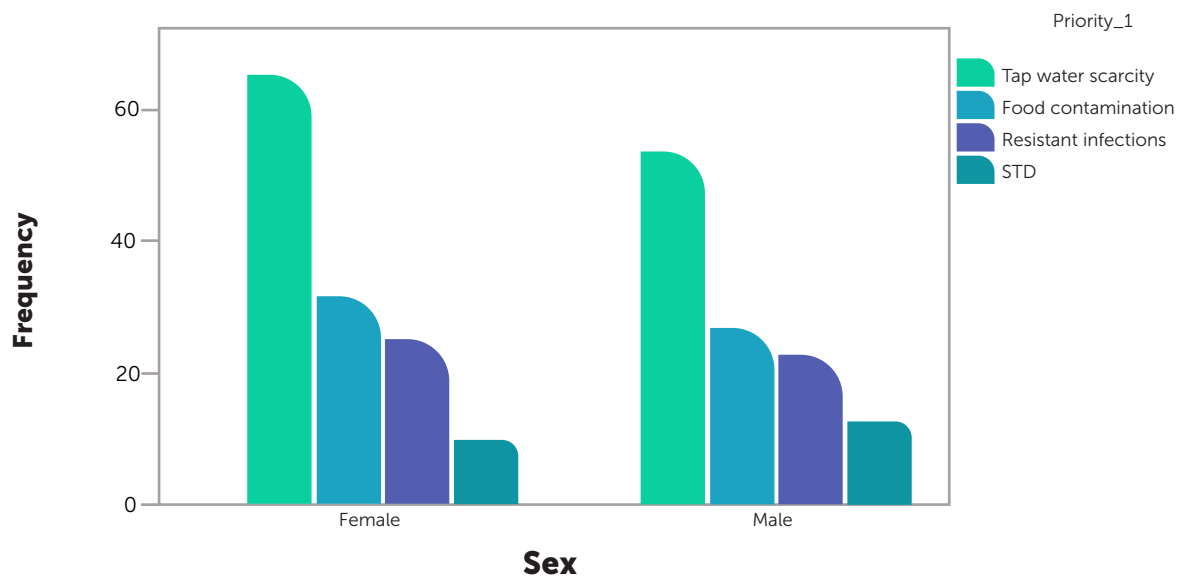
Graph 1B. Health priority 1 by profession and sex.

Occupation = Healthcare personnel in contact with patients



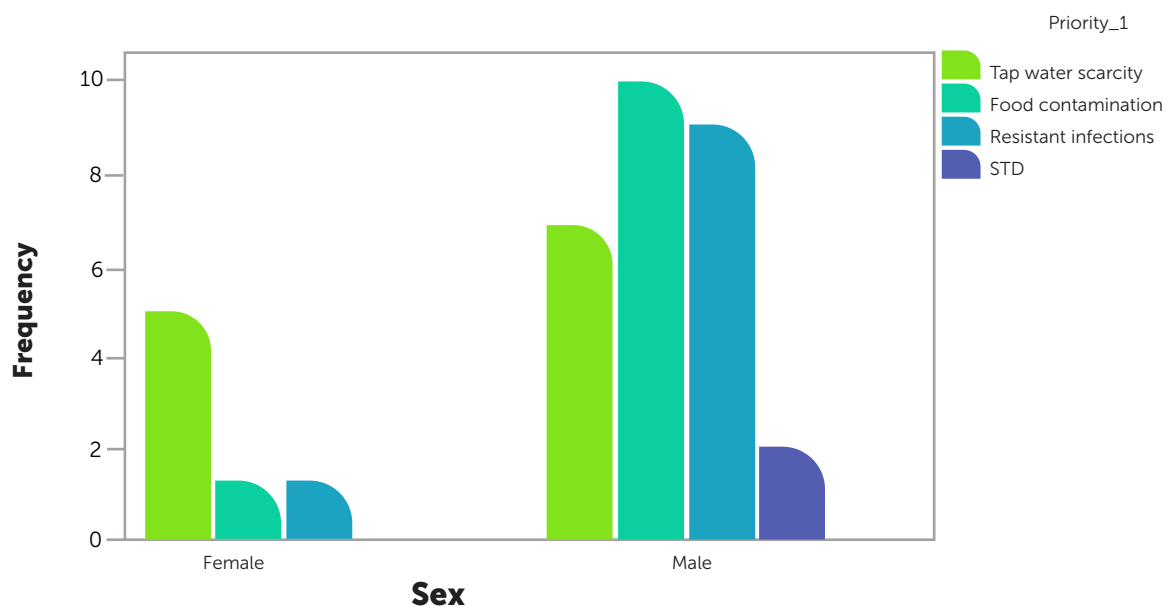
Source: self made

Graph 1C. Health priority 1 by profession and sex.
Occupation = Other Professionals



Source: self made

Graph 1D. Health priority 1 by profession and sex.
Occupation = Caretakers (cleaning personnel, drivers, maintenance personnel or related professionals)



Source: self made

Figure 1. Poll results about feelings when knowing there is no cure anymore for some diseases.



Campaign

During the month with forums and stands there was participation from several institutions and key private physicians as well as internal qualified personnel to transmit the concern about exposure to resistant organisms. Week (1), during WASH, the event counted on the participation of Jorge Castaneda from the Salvadoran Water Authority (ASA for its acronym in Spanish), who shared data about environmental sanitation, an oral health professional and a member from the Environmental and Energy Efficiency Management Committee.

Among the stands, the microbiology laboratory employees contributed with cultured media obtained from different contamination focal points in the institution, another stand was about oral health and a last one about environmental sanitation. It was gathered from this week that women and girls have proportionally more exposure to drug resistant organisms since in this country they are designated to carry water from rivers, lakes and lagoons to supply their homes plus they are in charge of cleaning, water storage, etc. (see picture 1)

Picture 1. Panel DRI, Gender and WASH



Credits: Alejandro Rosales/ Henry Orellana

Week (2), habits were discussed. There was a Salvadoran PAHO/WHO representative (see picture 2), to highlight the importance of bringing attention to the impact that DRI could have depending on the genre, likewise, it was also mentioned that WHO was making a guide (WHO, 2024) about this perspective and how to approach it at a communitarian level. In the same event, it was also mentioned how the patriarchy affects nutrition in girls, teens and adult women since in many rural communities it has been normalized for them to be the last to eat, from what is left because men are considered to need more and better food due to their strength being the basis of their job. This panel was completed with a food engineer who spoke about a greater risk in women of contracting *Listeria*, *Shigella*, *E. coli* and *Salmonella* for being in charge of food handling while having little to no knowledge of their conservation and cleaning procedures. In the stands there were many talks about choosing food items for better nutrition, safe sexual practices and food handling and conservation.

Picture 2. DRI, Gender and habits



Credits: Alejandro Rosales/ Henry Orellana

Week (3), this week the panel had the addition of experts included a representative of CHIVO PETS Veterinary Hospital from El Salvador's Government, Dr. Melvyn Rogel, who referred to care of pets, the importance of not self-medicating pets and always feed them with quality products including the water they consume (see picture 4 and 5). From the Environmental and Energy Efficiency Management Committee the importance that should be given to medicated animals' waste was discussed. This because 80% of excreted antibiotics are found as active ingredient (Gautron, 2023) and could remain in the environment from 1 to 3,466 days (Mora-Gamboa, 2022) This panel was also composed by the head of DNM's clinic who commented on how much women rely on self-medication, not only with themselves but with the children or elderly who in many cases they are responsible for. This is due to the little time they have available to see a doctor, missing work days, or another real situation as is pharmaceutical poverty. Additionally, occupational safety and frontline health workers were mentioned. Occupation is inherent to gender, every time more equality in work positions is promoted for both genders. However there are some positions with discernible polarization such as cleaning crews. Most people in cleaning crews are women who, mostly due to comfort, or because adequate equipment is not provided, are exposed to substances, fluids and sprays without any protection or due to long work hours with little access to tap water, which can result in major risk of contact with resistant organisms as *E. coli* or to develop a urinary tract infection that may cause a potentially resistant infection.

However, men are more evident in masonry, maintenance, etc. and are more exposed to respiratory tract irritants making it easier to contract resistant infections such as pneumonia. In the case of frontline health workers, it was mentioned that, in Latinamerica, 86% of employees in this field are women, nevertheless, equipment as gloves, eye protection, breathers, masks, among others are not adapted to female anatomy since universal sizing do not protect them according to standardized specifications thus generating a higher risk than men to contract resistant infections, mostly in hospitals, meanwhile men have more administrative positions (Gautron, 2023), (Turner & Marshall, 2020).

The lack of a gender perspective was even more noticeable during the COVID-19 pandemic considering that personal protective equipment was not adapted to menstruating women, not mentioning the white color, leaving them unable

to use menstrual products hygienically or without going through discomfort increasing the risk of contracting urinary tract infections (WGH, 2021), the same occurs with pregnant women living in fear of acquiring the disease because equipment could not protect them properly.

In the stands the talk was widened with interactive exercises about the responsible use of antibiotics in animals and their abuse as a prophylactic. The six steps veterinarians need to follow to prescribe antibiotics (WSAVA, 2024). It was mentioned how to make proper use of personal protection equipment and how to choose the best size to keep the adequate protection.

Picture 4. DRI panel, Gender and Healthcare professionals



Credits: Alejandro Rosales/ Henry Orellana

Picture 5. National Director of Medicines, Noe García Iraheta



Credits: Alejandro Rosales/ Henry Orellana

Week (4), this was the most representative in gender matters since the panel was constituted by a gynecologist, a geriatrician, and a pediatrician; moreover, another member of the panel was part of the registry team from the Agriculture Ministry (MAG by its acronym in Spanish) (see picture 6), in which the difference of exposure among the different professions according to gender since most female veterinarians assist pets while male veterinarians are responsible for big species.

The latter being exposed to several risks coming in contact with blood and animal waste, attending conception, abortions, sprays, etc. It was also mentioned how boys and girls in rural areas are in charge of sick domestic animals sharing spaces with vulnerable kids.

Among the discussed topics was the exposure to a major risk of urinary tract infections due to menstrual poverty because they do not count with proper or enough menstrual products, little access to soap and water in circumstances such as a shelter (Al Kady, 2024) or during war situations. Another remark was about small children since a poor hygiene could develop a urinary tract infection from a young age. Furthermore, the geriatrician referred to the polymedication in the elderly and the surge of risks to acquire a resistant infection as is pneumonia. In the elderly, there is a greater risk of suffering urinary tract infections due to diaper usage, dehydration, among other factors, mostly men (Gautron, 2023)

Other care strategies are keeping good oral and personal hygiene as well as good nutrition in the elderly in view of a weakening immunological system and a rise in the risk of resistant infections. In the stands dedicated to this topic information was widened with demonstrations on how to properly manage hygiene in elderly, how to clean children adequately and correct menstrual products usage.

Picture 6. DRI panel, Gender and Hygiene



Credits: Alejandro Rosales/ Henry Orellana

Antimicrobial Resistance Awareness Week Awareness Week day 1

*Institutions keep the respective acronym in their original language.

As special guests there were CONARAM members and as an audience the Medicine students from the University of El Salvador. Among the contributors there were PAHO/WHO with Dr. Daniel Reyes as a representative who gave a lecture on gender inequality and its relationship with Antimicrobial Resistance (WHO, 2024). Following up, there was a forum with some CONARAM members, such as the Medical Command in the Salvadoran Army (COSAM), the Salvadoran Social Security Institute (ISSS), the Environmental Sanitation Directorate/Ministry of Health (DISAM/MINSAL), the Sanitary

Regulatory Superintendency (SRS), Evangelical University of El Salvador (UEES) (Picture 7 and 8) in which strategies by each of them are under development within the National Plan against AMR (2024-2029) in the same manner, other members from the commission representing the National Social Security Institute (INS), Infectious Diseases Office (OIE/MINSAL) and the United Nations Food and Agriculture Organization (FAO) Afterwards, a vaccine workshop which consisted on solving questions. This was carried out by the SRS Communications Unit emphasizing the importance of vaccines to fight AMR (Figure 9) and the second part of the workshop ended with the review of vaccines according to the respective platform. To finish the first day of the event, a presentation on the article about AMR between 1990-2021 (Naghavi, 2024) was given.

Picture 7. National Commission Against Antimicrobial Resistance Forum



Credits: Gerson Martínez Alemán

Picture 8. Medicine students from the University of El Salvador



Credits: Gerson Martínez Alemán

Figure 9. MRI GAMES 2 - AWARENESS WEEK about vaccination



Credits: Norma Avilés del Cid

AWARENESS WEEK day 2

Along with the transformation from DNM to SRS, the internal structure has been strengthened, also, new duties have been acquired due to the Sanitary Regulatory Superintendency Law coming into force. Hence, the Gender and Social Inclusion Unit, the Veterinary Drugs and Related Products Registration Unit, and the Food and Beverage Registration Unit, who bring us the tools for lectures including Gender, AMR, rational veterinary drug usage, and food innocuity respectively. Besides, it was an honor to have the SRS colleagues to be a part of the forum Results of the Action Plan against the Antimicrobial Resistance in the areas: Microbiology Quality Control Laboratory, Occupational Safety and Security Unit, the SRS Clinic, Clinical Trials Unit

and the Legal Office for the General Management (Picture 9). Following the forum, there was a participation from Dr. Jorge Molina Aguilar who brought an anthropological and psychological perspective about self-medication. Finally, the self-care and self-medication forum was held with the participation of the Registration and Market Authorization Intendant and the Surveillance Intendant as well as Engineer Marilyn Deleón Castro presenting her recently co-published book "Exploring Self-medication" (original name in Spanish: Circunnavegando la Automedicación) (Molina Aguilar et al, 2024) also the Pharmaceutical Products Registration Unit and the Veterinary Drugs and Related Products Registration Unit, who educated about the responsible usage of drugs and the usefulness of free sale medication (Picture 10).

Picture 9. Forum about the Results of the Action Plan against the Antimicrobial Resistance



Credits: Gerson Martínez Alemán

Picture 10. Forum about the Results of the Action Plan against the Antimicrobial Resistance



Credits: Gerson Martínez Alemán

Indicators

Phase 1.

- Scope. The intranet space received 317 visits and even today there are still interactions through a comment wall. The different spaces have received more than 385 views. The posts receive an average of nine views. Visits to forums and stands had an average of 300 people per week.
- Engagement. In the gallery, there were 19 upvotes, plus 85 likes, 17 comments and no shares.
- Conversion rate. There were 114 appearances in forums and in stands.
- Brand feeling. There were comments from both sides, negative and positive, from the first there were three: some stands talked for too long, there was no coffee break and there stood for too long, so it has been considered more organization and logistics are required; meanwhile positive comments are linked to content and here are collected four: there was always expectancy towards the next forum, many identified misconducts in their daily lives, they had never thought about their exposure DRI, public was thankful for the talks and the most important, they highlighted the physicians' function of doctor appointments to avoid resistant infections.

Phase 2.

- Scope: 10,740 views, 727 profile interactions, 297 new followers were identified in the three social media accounts for the Superintendent.
- Engagement: There were a great number of people interacting with posts from the Superintendent's account.
- Brand Feeling: four comments received were positive
- Media exposure: ASA account shared the event in their social media.
- In other results, a measure included that all inductions in the institution receive a talk about antimicrobial resistance.

Table 1. Engagement: "likes", "shared" and "comments" among Superintendent's social media.

Social Media	Posts	Reach	Likes	Shared	Comments	New user	Other reations
X	6	2,219	97	34	3	0	211
LinkedIn	3	2,145	156	28	0	9	-
Facebook	3	3,405	261	27	1	182	430
Instagram	3	2,975	294	16	0	106	106

Source: Superintendent's social media manager self made

Discussion

The concept of Drug Resistant Infections was well apprehended by the audience, this helped understand why making this event was so important since women, approximately half the institution, felt identified with at least one of the topics and the other half identified their families in the posed cases. It is expected that at a home level some of the routines they had could be changed to avoid possible infections or at least warn from possible infection vectors.

The term gender in the event was a limiting factor at the beginning, due to the preconception of it, since it is not scientific, therefore it has been valuable to make real close situations known to be able to grasp why such an urgent issue is related to a social concept. On the other hand, this perspective has been an advantage, because it had not been explored, which in a way piqued some guests' interest. Antimicrobial resistance has always been tied to self-medication and misuse of antibiotics, but not from a more humanitarian perspective, not from a social behavior perspective (WHO, 2023a), (WHO, 2019). This is why it is important that AMR is not confined to healthcare, agriculture, drugs, among other institutions, but also those that oversee for equity in opportunities for children and teens, for our elderly, for those who oversee education, and occupational safety and health.

It was cleared up from the beginning that the main objective is not to promote gender equity for equal roles since that is not this institution's scope, but, considering these roles to minimize the risk of acquiring drug resistant infections, depending on the activity performed in society.

This intervention has been pilot tested at an institutional level, not many conclusions can be drawn from a non-representative sample, however, this intervention's result has been encouraging. The event's planning has even allowed modifications of some procedures as is the case of a talk given to new employees, and in the foreseeable future, contents in certifications for food handlers or veterinary pharmacists will be updated.

About the obtained results, it is considered that it has been a successful first step. Some indicators have exceeded expectations, there was a high participation rate from public servers, there is still interaction through the intranet's DRI space, which is encouraging, however it is necessary to spend some time updating the contents. These types of spaces are important, since most likely, many employees who are not familiar with the topic would not read this information through other means and would leave them outdated in relation to new advances.

Compared with the event by WHO (WHO, 2023b), for Antimicrobial Resistance Awareness Week 2023, there is still much to be done to reach maturity, much to be done to see this seed grow within our institution. However, it has been considered that, with new horizons drawn in food and veterinary medicine regulation, a larger percentage in awareness at a national level can be reached having numerous strategies. In addition, external communication will be strengthened in view of the fact that there is still plenty to convey.

Regarding the intersection between gender and AMR (Gautron, 2023) we can also affirm that in El Salvador, people who supply water at home, do laundry in rivers, prepare meals, and are in charge of cleaning are women, and not only in their homes, but also at those where they work at as

house cleaners. In the case of care providers for the ill, are also mostly women, whether it is as nurses, care givers, mothers, housewives, among other roles, exposing themselves to even more diseases. It is worth commenting that here also comes into play a feeling of safety when allowing an unknown woman at home rather than an unknown man, in the case of male nurses or care givers. This also ensues into an increased rate in self-medication, in children and elderly alike. A decreased rate in doctor appointments to avoid missing work or due to lack of time. Women and girls lose the most during unsafe sexual practices, and this is noticeable in the rise of unwanted pregnancies (UNFPA, 2024) it is apparent that they are not in a position to demand protection or just saying no. About husbandry, it is considered that, besides veterinarians, as stated above, is not only a matter differentiated in gender, or at least it is not as prevalent and evident. When it comes to occupational safety it is important not only to check and promote the design of personal protective equipment for women but also to disclose the importance of avoiding the spread of resistant agents because resistant bacteria could get to anyone beyond hospitals.

The Antimicrobial Awareness week has been of great importance since the institutions involved have joined forces in an event to convey this pandemic's message to the present and future generations of veterinarians, food engineers and doctors. In the same way, those tasks towards the population in the works were highlighted. Also, from the SRS, new commitments have been made with the new healthcare attributions, as well as the veterinarian drugs and food. Thus, there is a great responsibility and opportunity to implement a One Health perspective where human, animal and environmental health come into one sustainably, leaving options to the future generations to fight this silent pandemic as it is the Antimicrobial Resistance.

Conclusions

1. To convey a message at a community level we must express it in the community's language. It is not our duty to educate on scientific terms but to translate the situation we need to change into simple words
2. The concept of gender has many interpretations nowadays, which has obliterated the importance of this perspective in healthcare measures, thus it is important to involve the actors in these events, to see and listen firsthand the consequences of

ignoring that society's own rules could be damaging to public healthcare.

3. Gender as a concept must transcend beyond a social perspective to realize how interconnected it is with health sciences. If we want the population to reflect against antimicrobial resistance we must widen the multidisciplinary within the actors working in this plan, it is not just access to antibiotics and usage surveillance, it is also to get involved in the individuals' environment, from their routines at home to their current work conditions.

4. Education on Drug Resistant Infections from an early age is imperative since anyone could be a host for infectious diseases.

References

1. Wellcome Trust (2019). Reframing resistance. How to communicate about antimicrobial resistance effectively. <https://wellcome.org/reports/reframing-antimicrobial-resistance-antibiotic-resistance>
2. Juliette M C Gautron, Giada Tu Thanh, Violet Barasa, Giovanna Voltolina (2023), Using intersectionality to study gender and antimicrobial resistance in low- and middle-income countries, Health Policy and Planning, Volume 38, Issue 9, Pages 1017–1032, <https://doi.org/10.1093/heapol/czad05>
3. Vivian Tien, Chitra Punjabi, Marisa K Holubar (2020). Antimicrobial resistance in sexually transmitted infections, Journal of Travel Medicine, Volume 27, Issue 1, taz101, <https://doi.org/10.1093/jtm/taz101>
4. FasterCapital (2024). Medir el éxito de las iniciativas de concientización métricas clave a monitorear. <https://fastercapital.com/es/contenido/Medir-el-exito-de-las-iniciativas-de-concientizacion-metricas-clave-a-monitorear.html#qu--medir->
5. WHO (2024). Addressing gender inequalities in national action plans on antimicrobial resistance. Guidance to complement the people-centred approach.
6. Mora-Gamboa MPC, Rincón-Gamboa SM, Ardila-Leal LD, Poutou-Piñales RA, Pedroza-Rodríguez AM, Quevedo-Hidalgo BE (2022). Impact of Antibiotics as Waste, Physical, Chemical, and Enzymatical Degradation: Use of Laccases. *Molecules*. 11;27(14):4436. doi: 10.3390/molecules27144436. PMID: 35889311; PMCID: PMC9319608.
7. Turner MC, Marshall SD (2022). Can gendered personal protective equipment design account for high infection rates in female healthcare

workers following intubation? *Anaesthesia*. 2021 Jan;76(1):132-133. doi: 10.1111/anae.15206. Epub ,PMID: 32654118; PMCID: PMC7405316.

8. WGH (2021). Fit for women? Safe and decent PPE for women health and care workers

9. WSAVA (2024), (2024, 6 de julio). Seis momentos en la prescripción veterinaria de antimicrobianos. https://wsava.org/wp-content/uploads/2024/05/FECAVA_6MOMENTS_SPANISH.pdf

10. Al Kady C, Moussally K, Chreif W, Farra A, Caluwaerts S, Wertheim H, Soukarieh D, Gordillo Gomez F, Dibiasi J, Lenglet A. Overuse of antibiotics for urinary tract infections in pregnant refugees, Lebanon. *Bull World Health Organ*. 2024 Jun 1;102(6):389-399. doi: 10.2471/BLT.23.291235. Epub 2024 Mar 27. PMID: 38812803; PMCID: PMC11132156.

11. Naghavi, Mohsen et al (2024). Global burden of bacterial antimicrobial resistance 1990–2021: a systematic analysis with forecasts to 2050. *The Lancet*, Volume 404, Issue 10459, 1199 – 1226

12. Molina Aguilar, J., Pérez-Acosta, A. y Deleón Castro, M. (2024). Circunnavegando la automedicación. Editorial Universidad Pedagógica de El Salvador "Dr. Luis Alonso Aparicio".

13. WHO (2023). Progress on household drinking-water, sanitation and hygiene 2000-2022: Special focus on gender

14. OMS (2019). El agua, el saneamiento y la higiene en los establecimientos de salud.

15. WHO (2023). World AMR Awareness Week campaign 2023. Summary of successes, challenges and lessons

16. UNFPA (2024). Costo Económico y Social del Embarazo Adolescente en El Salvador. https://elsalvador.unfpa.org/sites/default/files/pub-pdf/milena_unfpasv_2024__2.pdf