

MOBILIZING YOUNG PEOPLE FOR TACKLING ANTIMICROBIAL RESISTANCE (AMR): THE EFFECTIVENESS OF REACT AFRICA YOUTH INITIATIVES

AN EVALUATION REPORT



The Photo from AMR National Symposium 'My Turn' Kenya



Mobilizing Young People for Tackling Antimicrobial Resistance (AMR): The Effectiveness of ReAct Africa Youth Initiatives

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ABBREVIATIONS

AMR	Antimicrobial Resistance
AMRLEP	AMR Leaders' Program for Tertiary Students in Africa
AYARA-TF	African Youth Antimicrobial Resistance Alliance – Task Force
CSOs	Civil Society Organizations
DAC	Development Assistance Committee
FGDs	Focus Group Discussions
ID	In-depth Interviews
NAP	National Action Plan
OECD	The Organisation for Economic Co-operation and Development
SDGs	Sustainable Development Goals



The Photo from AMRLEP

1. Executive Summary

Antimicrobial resistance (AMR) is a global public health threat that directly attributed to 1.27 million deaths in 2019. Its determinants are multi-dimensional and closely linked to poverty and deprivation which is more evident in sub-Saharan African region. These include lack of knowledge about antimicrobial resistance, overuse, and misuse of antimicrobials in the human and animal sectors, and poor water, sanitation and hygiene services, weak health systems and community engagement in its mitigation.

While the population growth is expected to stagnate in other parts of the world, it will boom in the sub-Saharan region in the coming decades due to high fertility and better life expectancy. The region is also witnessing a rapid rise in working age population whose median age is just 18 well below the global median of 31. Having 70% of the population aged under 30 in the sub-Saharan region, Africa has the youngest population in the world. Recognizing this high proportion of youth in the African context as an opportunity, ReAct Africa has started engaging with them through various initiatives since 2015.

The main objective of this evaluation was to assess the role of ReAct Africa in mobilizing youth towards AMR mitigation efforts using *The Organisation for Economic Co-operation and Development - Development Assistance Committee (OECD – DAC)* evaluation criteria – effectiveness and impact. Besides supporting better alignment with ReAct Africa's strategic objective, the findings will support in advocacy and building partnerships, positioning ReAct Africa as a leader in AMR youth initiatives in the region. For this, it used a mixed design technique that included focus group discussions, in-depth interviews, and an online survey.

The two flagship initiatives brought out by ReAct Africa for youth were *AMR Leaders programme for tertiary students in Africa (AMRLEP)* to create 'Youth Champions in AMR' and *African Youth Antimicrobial Resistance Alliance Task Force (AYARA-TF)*, a movement to 'unify AMR youth voices' across Africa. Other programs included 'My Turn' (It has Ugandan and Kenyan editions and is planning to be expanded to include more countries), tertiary student based 'One health clubs' in Zambia to mention a few. ReAct is currently working on developing an 'AMR Co-ordination hub' which will provide a virtual platform for youth to meet, interact, learn and exchange ideas with others working in the same field. It was interesting to note that almost 90 percent of the survey respondents have interacted with these initiatives either frequently or occasionally. Besides most of them had felt that the initiatives were quite effective in raising awareness. The participants had also demonstrated high level of knowledge about AMR which suggested that they were equipped to contribute towards furthering this cause forward.

The findings from FGDs and In-depth interviews had showed that ReAct Africa youth initiatives were successful in highlighting the scope of AMR and provided support in terms of skills, resources, and opportunities. This strengthened their understanding and abilities that enabled them to be involved in more focused AMR mitigation efforts. The report also highlighted some of the challenges faced by youth movements and gathered suggestions from participants regarding future role of ReAct Africa. It concluded with a few examples of youth movements in health from which ReAct Africa could draw insights and guidance.

2. Background and Strategic Framework

2.1. Introduction

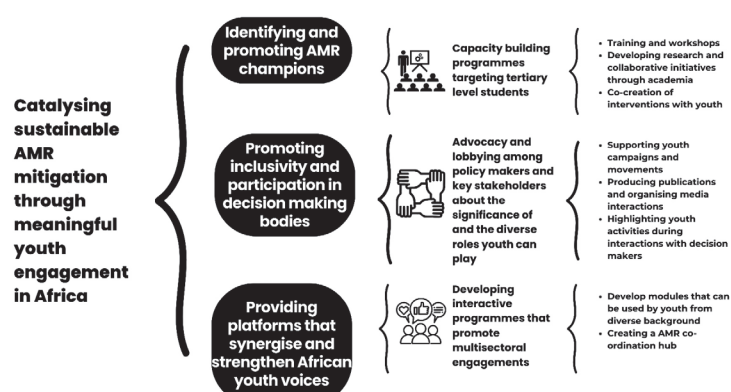
Antimicrobial resistance (AMR) is a natural phenomenon that occurs when microorganisms get exposed to antimicrobials and adapt themselves thereby rendering treatment modalities ineffective. It is one of the top ten global public health threats that humanity is facing. A comprehensive analysis of the global impact of AMR has reported that, in 2019, an estimated 4.95 million deaths were associated with bacterial AMR of which 1.27 million were directly attributable to it (Murray et al., 2022).

In Africa, AMR has been documented to be a multisectoral problem with highest burden being in Sub-Saharan Africa (Kariuki et al., 2022). Some of the key drivers of AMR in the region include poor governance, weak health systems and inadequate infrastructure causing limited access to clean water and sanitation and inadequate vaccine coverage. This is further worsened by economic disparities, inappropriate usage in animal and food industry and lack of intersectoral coordination specifically with respect to environment sector (Moyo et al., 2023). It is important to acknowledge that AMR has the potential to reverse the socio-economic growth and development attained by Africa in the past few decades.

To tackle this problem innovative and sustainable solutions are required for which the creativity and the dynamism of the youth are invaluable. The sub-Saharan African region is undergoing a significant demographic transformation, characterized by a rapidly growing youth population. In 2019, as per estimates 19 percent of the global youth (aged 15 -24) were residing in Africa and this is expected to be 42 percent by 2030 (UNDP 2023). This demographic dividend presents a unique opportunity to harness their energy and potential to address pressing challenges posed by AMR. Engaging young people will bring fresh perspectives and innovative solutions to complex problems. Their digital literacy and social media acumen enable them to effectively raise awareness and advocate for change. Besides, investing in youth development essentially means investing in the next generation of public health leaders, researchers, and policymakers. By participating in AMR initiatives, young people can acquire valuable skills, such as critical thinking, problem-solving, and communication, which are essential for addressing other health challenges as well. Furthermore, youth can play a vital role in community engagement by mobilizing their peers and communities to adopt preventive measures, promote responsible antibiotic use, and challenge harmful social norms. By involving youth in decision-making processes, a sense of ownership and responsibility is fostered, leading to more sustainable and impactful interventions. Through advocating for evidence-based policies and influencing decision-makers, young people can shape the future of AMR prevention and control. In the long run, all these efforts can contribute to the development of novel solutions that address the root causes of AMR. Moreover, by mentoring younger generations, they can ensure the continuity of knowledge and skills, and take the lead in the fight against AMR. This will help in building a healthier and more resilient future for Africa. Therefore, it is imperative to invest in youth-focused initiatives, provide them with the necessary resources and support, and create an enabling environment for their participation and leadership.

Recognizing the crucial role played by youth in tackling AMR, ReAct – Action on Antibiotic Resistance – Africa (ReAct Africa) started engaging with them since 2015 to catalyze AMR mitigation efforts. The engagement was built on a framework that focused on capacity building, advocacy, and training as measures for mobilizing and engaging youth in Africa (**Image 1**).

Image 1: Strategic framework for ReAct Africa Youth Engagement Initiatives



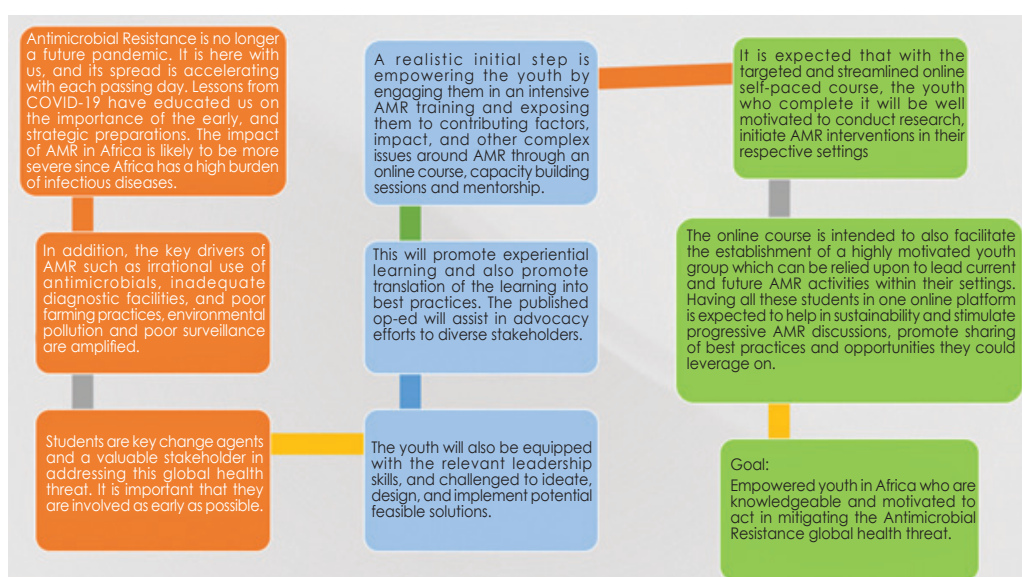
One of the main initiatives by ReAct Africa included its flagship program aimed at tertiary students - planning and implementing the *AMR Leaders programme for tertiary students in Africa (AMRLEP)*. This program targets tertiary level students to improve their knowledge of AMR, and to develop them as AMR leaders both during their student period and while pursuing their careers thereafter. For this, the programme uses a systems approach with a structured format that include workshops, mentorship programs and practice-oriented activities. Once enrolled, the programme will run for a period of 6 months, with students dedicating 5 hours a week to complete various assignments. The curriculum has a 'one health approach' to the topics covered and has sections linking AMR with policy and programs such as Sustainable Development Goals (SDGs), National Action Plans (NAPs) and health systems. It also introduces students to strategies such as design thinking and project management skills which are essential for translating the knowledge gained into practical interventions in their respective areas of work. The theory of change that explains how this program help in developing leaders is summarized in **image 2**. So far it has equipped more than 200 participants from 8 African nations and is still growing with more participants joining each year. Some of the key outcomes were the following

- Establishment of a platform for continuous exchange of best practices among students which has led to a lot of collaborative projects and concerted youth interventions within Africa.
- Increased the number of tertiary level students prioritizing AMR affiliated careers after completion of their undergraduate courses.
- There was a not able increase in research out put evidenced by the increase in AMR-related research conducted by students, resulting in published papers, presentations, and contributions to academic and policy discussions in various conferences an workshops.
- Enhanced policy agement by youth involved in the programs as they began to actively engage with policymakers at the national and sub-national levels in their respective countries.

These outcomes created a network of young leaders committed to mitigating AMR in Africa and beyond. Some of the AMR youth-led organizations whose emergence has been contributed by this work include:

1. AMR Intervarsity Program - Nigeria
2. Working Against Virulent Epidemics – Uganda
3. Uganda Youth Consortium for Antimicrobial Stewards - Uganda
4. Actions des Jeunes contre la Résistance aux Antimicrobiens – Burkino Faso
5. Alliance Against Antimicrobial Resistance - Nigeria
6. Vijana in Antimicrobial Resistance - Zambia
7. Snowman Artland - Kenya
8. Generational Stewards for Antimicrobials - Zimbabwe
9. Solving Resistance - Kenya
10. Consummate Health and Sanitation - Liberia

Image 2: AMRLEP – Theory of Change



Besides this, ReAct Africa also supported the development and launch of *African Youth Antimicrobial Resistance Alliance -Task Force (AYARA-TF)*. This task force acts as an independent platform that primarily focuses on strengthening and unifying the voices of youth movements in AMR across Africa through collaborative and multidisciplinary engagement. This will further promote youth inclusivity and participation in decision making deliberations by policy makers in their respective countries/governance settings. Currently ReAct Africa is working on the development of *AMR Youth Coordination Hub*, an interactive platform for youth developed and maintained by ReAct Africa, that can act as a virtual center for all youth movements focused in AMR to meet, interact, collaborate and learn. This will further consolidate ReAct Africa's position as the pioneering leader in youth led initiatives for AMR mitigation on the African continent.

ReAct Africa has led a strong foundation for empowering next generation policy makers and public health professionals in AMR mitigation. It is important to give continued support and investments in these initiatives to overcome the multifaceted challenges posed by AMR and to sustain the public health gains achieved by Africa so far.¹

2.2. Why this evaluation and the key criteria used.

The primary objective of this evaluation is to understand the role played by ReAct Africa in mobilizing youth towards AMR mitigation efforts in Africa. This is important as many of its programs especially AMRLEP have shown significant promises in rallying young men and women around AMR. Its unique efforts that focus on knowledge building, practical application and leadership development align well with the needs of the region and global community. An evaluation is crucial to understand the success of the approach taken by ReAct Africa among youth and areas for improvement. This will help optimize future interventions and maximize their impact. The findings will further help in refining the program's approach by targeting specific sub groups, and tailoring interventions to local contexts. It can demonstrate accountability by providing evidence of ReAct Africa's effectiveness to donors, partners, and stakeholders, ensuring continued support and investment. It will also provide ReAct Africa a powerful advocacy tool to strengthen partnerships with governments, civil society organizations (CSOs) and other international organizations as a pioneer in AMR youth initiatives. Additionally, it will facilitate benchmarking against global best practices, and help identify emerging trends in youth engagement and AMR in Africa. Further, such an exercise will support better alignment of youth initiatives with the overall strategic objectives of ReAct and enable effective resource mobilization. For this it uses the OECD-DAC evaluation criteria that focuses on relevance, efficiency, effectiveness, impact, and sustainability. This evaluation will primarily focus on questions under the criteria - effectiveness and impact.

Effectiveness

1. How effective has ReAct Africa been in improving knowledge and creating awareness among youth that contributes towards AMR mitigation efforts in Africa.
2. To what extent has ReAct Africa been successful in providing the platform where youth from diverse background could network and collaborate?

Impact

1. How has ReAct Africa's focus on youth mobilization influenced the participation of young people in decision making roles?

2.3. What is the evaluation report contributing to

The **purpose** of this report is to assess the progress and impact of various youth initiatives by ReAct Africa. This comprehensive evaluation aims to:

- **Identify Key Findings:** Uncover the key lessons learned, successes, and challenges associated with ReAct Africa's youth engagement programs.
- **Assess Program Effectiveness:** Evaluate the extent to which the youth initiatives by ReAct Africa have succeeded in creating awareness about AMR among youth and providing them with a platform for team work.
- **Provide Recommendations:** Offer actionable recommendations for enhancing future

¹ Kariuki, S., Kering, K., Wairimu, C., Onsare, R. and Mbae, C. (2022) 'Antimicrobial resistance rates and surveillance in Sub-Saharan Africa: where are we now?', *Infection and Drug Resistance*, 15, pp. 3589-3609. doi: 10.2147/IDR.S342753.

Moyo, P., Moyo, E., Mangoya, D., Mhango, M. and Mashe, T. et al. (2023) 'Prevention of antimicrobial resistance in sub-Saharan Africa: what has worked? What still needs to be done?', *Journal of Infection and Public Health*, 16(4), pp. 632-639.

Murray, C.J.L., Ikuta, K.S., Sharara, F., Swetschinski, L. and Robles Aguilar, G. et al. (2022) 'Global burden of bacterial antimicrobial resistance in 2019: a systematic analysis', *The Lancet*, 399(10325), pp. 629-655. doi: 10.1016/S0140-6736(21)02724-0.

UNDP, 2023. *Youth in Africa 2023*. [online] United Nations Development Programme. Available at: <https://www.undp.org/sites/g/files/zskgke326/files/2023-05/undp-africa-youth-in-africa-2023-EN.pdf> [Accessed 15 October 2024].

youth engagement strategies, including potential improvements to program approach, implementation, and areas of focus.

Its **scope** includes assessing the extent to which programs empowered youth to take ownership of their learning and action. This is by understanding how various initiatives led to the development of youth leadership skills and capacities. Additionally, it will analyse the extent to which youth were involved in initiating and implementing their own projects and initiatives, demonstrating their ability in addressing AMR. It will also delve into the specific challenges and barriers faced by youth in engaging with AMR issues, such as lack of awareness, resource constraints, and societal factors. Besides it intends to identify a few strategies from the youth themselves by which these constraints can be overcome.

This evaluation report provides a wealth of information that significantly contribute benefit clients. It will bring in data-driven insights that empower clients to make informed decisions, refine strategies, and allocate resources effectively. By highlighting strengths and weaknesses, this will enable clients to optimize program design and implementation, ultimately maximizing impact and achieving better outcomes. Additionally, it will demonstrate program effectiveness, fulfil reporting requirements, and build trust with stakeholders. By fostering a culture of learning and innovation, it will contribute to continuous improvement and the development of more effective programs. Following are the **target stakeholders** for this report.

- **ReAct Africa:** will be able to understand the effectiveness of the programme and help identify areas of improvement.
- **Public health organizations:** Both national and international organizations that are involved in AMR related activities will benefit from insights on various youth engagement strategies.
- **Policy makers:** Government bodies and policy makers can use the findings of this analysis to make informed decisions about involving youth while developing programs related to AMR.
- **Funding bodies:** The report will provide accountability to the funding bodies regarding the effectiveness of their investments.
- **Youth organizations and movements:** The findings will provide insights into the opportunities in AMR and may encourage more youth movements into AMR.

3. Methodology

The evaluation used a mixed method approach incorporating both quantitative and qualitative study designs. This was mainly because evaluating the effectiveness and impact of programs, whose effects were more subjective in nature, were fraught with many challenges. Attribution and causality were also difficult to establish in this case. Besides being subjective, measuring understanding, capacity and skills were difficult due to the long-term implications of AMR and the influence of various contextual factors. We also needed to factor in resource constraints and continuous role out of different youth led and community level activities by ReAct Africa. There were also many external confounders like changing social economic characteristics of the region, government policies, presence of other players in the field and improvement of technology which constantly influenced the younger population. After considering all these aspects the team identified the mixed design as the most robust approach. By combining quantitative and qualitative research methods, our team could triangulate findings by leveraging the strengths of each method and gain a deeper contextual understanding. Our team felt that this comprehensive approach allowed for a more nuanced and accurate assessment of the effectiveness and impact of youth programs by ReAct Africa.

For data collection the following techniques were used.

- An online survey was conducted among 110 young men and women, selected by convenience sampling, who were associated with ReAct Africa youth initiatives. This was to understand their frequency of interaction with AMR related initiatives by ReAct Africa and the felt effectiveness of these initiatives in raising awareness. It also had 10 multiple choice questions assessing the AMR knowledge of the respondents. The questions, which followed a 'One Health Approach', were adapted from resources utilized by various initiatives, and were validated by the team. A total of 51 responded to the survey, thus making the response rate as 46.4%. Majority of the responses came from Uganda (28), followed by Kenya (17), Zambia (4) and one each from Nigeria and Ivory Coast.
- Focus group discussions (FGDs) were conducted among youth participants of the various initiatives and program coordinators. This was to gain insights into their experiences and perspectives about how ReAct Africa had influenced their understanding and awareness about AMR, what challenges they had faced while engaging with these initiatives and how they perceive the platforms provided by ReAct Africa for networking and collaborations. Two FGDs were conducted which together had 7 participants in total.
- In-depth interviews (ID) were conducted to get a deeper personal account from policy makers and youth leaders about how these initiatives influenced them in participating in AMR mitigation and decision-making roles. A total of 9 participants were interviewed who gave their consent to be part of this evaluation.

For quantitative data proportions were calculated and necessary bivariate analysis was done to identify necessary associations. The content analysis was done for the qualitative data to identify the main concepts. Data triangulation was done to increase the validity and consistency of the findings. The results helped in identifying actionable recommendations and developing future strategies.

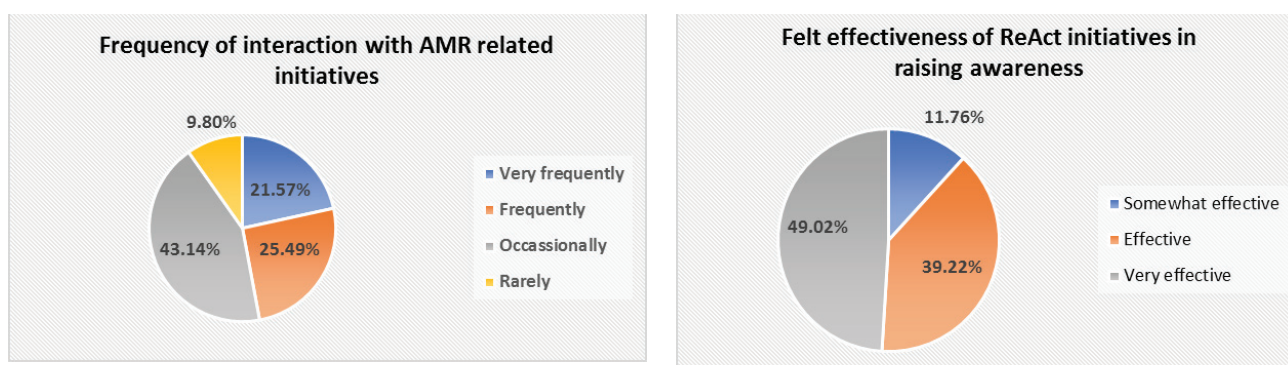
4. Key Findings

The findings from the methods used in the previous section were presented in two parts; the first part has the findings and discussions from survey questionnaire while the second part has the same from qualitative data.

4.1. Survey Findings

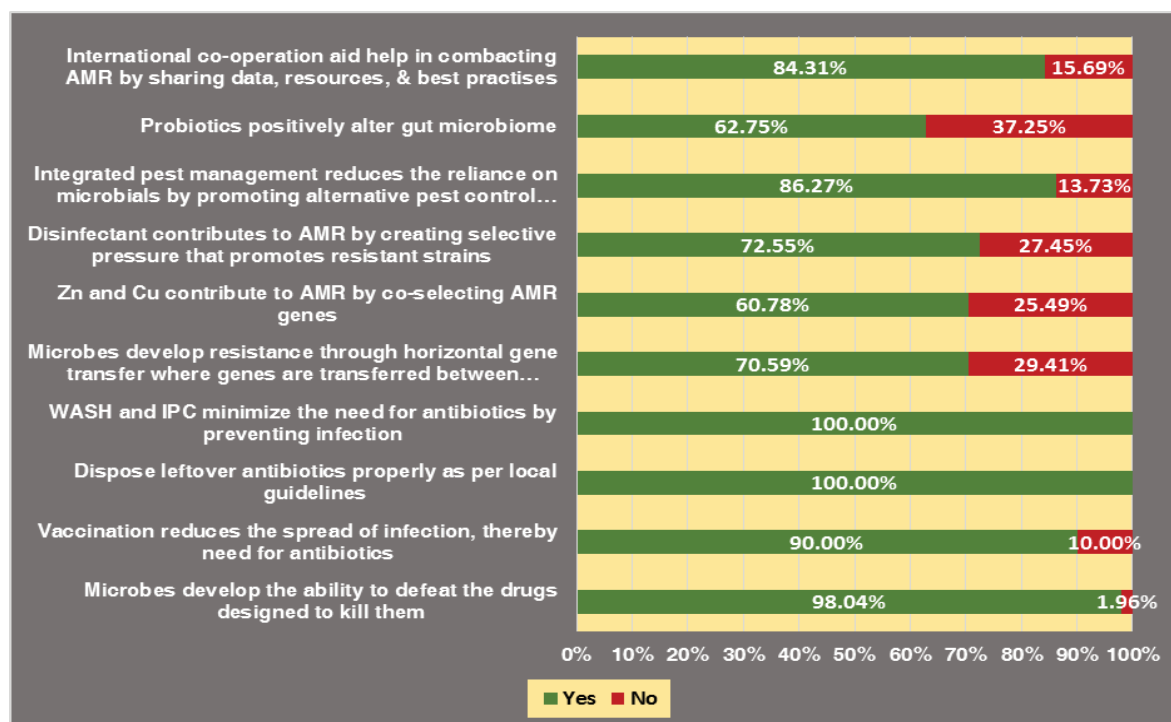
Out of 51 participants, 24 were involved in at least one ReAct Africa initiative in the past one year. The frequency of interaction and felt effectiveness of these initiatives were given below (Image 3). It was important to note that only less than 10% respondents interacted with ReAct Africa rarely. Similarly, nearly 90% felt that the initiatives were effective in raising awareness.

Image 3: Frequency of Interaction with and Felt Effectiveness of ReAct Initiatives



The questions that assessed the knowledge of the participants about AMR had one correct answer each in the multiple options provided. For the clarity of data presentation, the correct response for each question was converted into a statement. The participants who have chosen the correct response were marked as 'yes' and the rest were marked as 'no' (Image 4). It was also interesting to notice that for a few questions, all participants gave the correct response. The negative responses were mainly for questions from environment sector. This showed the high level of knowledge about AMR among the members of ReAct Africa youth initiatives highlighting its effectiveness.

Image 4: The Knowledge about AMR among the survey participants



4.2 Qualitative findings

The participants of the FGDs and the in-depth interviews were from medicine or pharmacy background. Following were the number participated from each category.

- Medical student/doctor: 7
- Pharmacist/pharmacy student: 6
- Medical laboratory specialist: 2
- Medical psychologist: 1

Under the various subheadings below, the key concepts identified from the qualitative data analysis have been summarized.

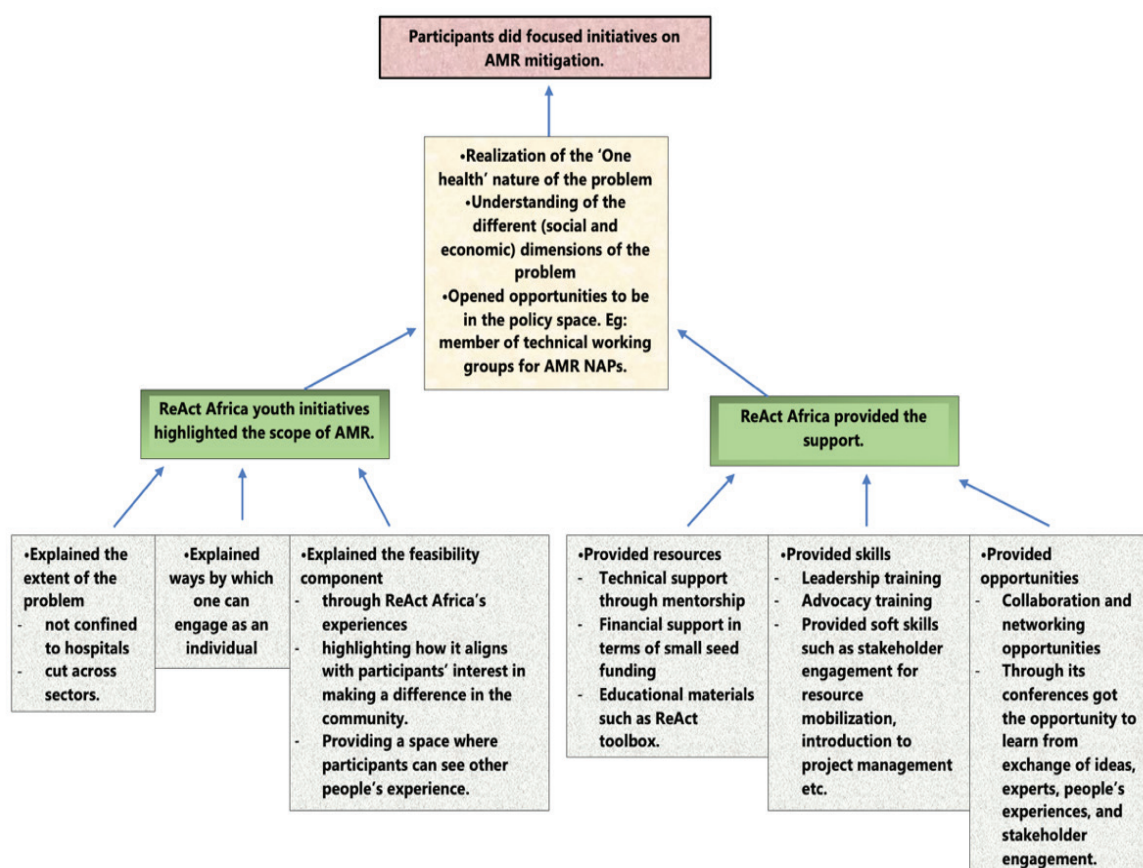
4.2.1. Factors that mobilized youth in AMR mitigation efforts

ReAct Africa has played a crucial role in mobilizing youth for AMR mitigation efforts in the sub-Saharan region. Many factors contributed towards this. Through its youth initiatives ReAct Africa successfully managed to introduce the scope of the problem, along with offering support to address them. This brought about a change in youth's understanding of the issue and the opportunities available in this sector that led to their involvement in more focused initiatives in AMR mitigation efforts (Image 5).

ReAct Africa is the pioneer in Youth Engagement in Africa

"Access to resources for AMR ecosystem is generally very low and [...] for youth engagement and youth initiative resources are even lower. But I can say that ReAct Africa is a major player within the African continent [because of which] youth engagement within the region has increased. [...] If you map the youth organizations that currently work on AMR within the African continent, and you try to check if they are directly or indirectly affiliated to ReAct Africa, you will see that all of them are linked to ReAct Africa. That just shows the work ReAct Africa has been doing to reach out to the African youth and also to build their capacity." **AM Id participant Kenya**

Image 5: How ReAct Africa contributed towards mobilizing youth towards AMR mitigation efforts



ReAct Africa Youth Initiatives highlighted the scope of AMR

The different programs such as AMRLEP, AYARA-TF etc by ReAct Africa managed to highlight to the participants the extent and spread of the problem. Many participants attended the program with the understanding that this was a human health issue. One of the major take home messages from these programs was the fact that AMR was not an issue that was confined to hospitals, in fact it had a universal dimension that spoke about the need for a 'one health' approach. As one of the participants had mentioned "My journey with antimicrobial resistance, officially started in 2021. [...] I was part of the first cohort of AMRLEP program. [...] it was so enriching. Prior to that, I knew a little about AMR from pharmacology class. But when I enrolled for that program, we learned about a lot of things. That's where I came across the one health approach. [Till then] I didn't understand how these things are interconnected, and how antimicrobial resistance cuts across all sectors [...] It's not only the people that are in the health sector, you can be an engineer, but somehow it is going to affect you."

The program also encompassed how a person can engage at an individual level as explained by one participant – "Actually It is through AMRLEP by ReAct Africa that I came to know what AMR really is, the role I can play, and how I can get more people involved to join us in the fight against AMR. So I think that's the beginning of my journey in the AMR space." By citing some of the activities of ReAct Africa, by providing a platform where they could exchange each other's experiences, these programs successfully showcased how working in the "AMR space contributed towards making a difference in the community."

Participants' take on how ReAct Africa inspired them

"The leadership is not about the edge [it] is about the vision and the influence that you have. [...] It [partnering with ReAct Africa] is an amazing experience, because it is an experience of mentorship. You know when you meet some people in your life, this is going to change your life forever. For example, when I participated in the leadership program by ReAct Africa my perspective did change [...] and helped me to explore some of the possibilities that I can have in my country with the support of ReAct Africa." **EN Id participant from Burkina Faso**

"That [participating in ReAct Africa program] was one of my stepping-stones in trying to understand what AMR was, and also it was sort of an endorsement towards the passion that I had in trying to make a difference within my community." **NM Id participant from Zimbabwe**

"ReAct Africa really brings together youth from every corner of the nation, and generally from other countries, to share their work. And that's very impressive. [...] it really encourages you to continue putting in the work." **JN Id participant from Kenya**

ReAct Africa provided the needed support to contribute towards AMR mitigation.

ReAct Africa provided the resources, skills and opportunities required to engage with different stakeholders in AMR. One of the resources identified by the participants in the interview were the technical support provided through mentorship provided by the ReAct Africa members. This included guidance and support for project and conference planning, designing and co-ordination. One participant had pointed out that this had supported them in better strategizing their community engagement initiatives and implement more impactful activities. Many participants had mentioned about the small financial support provided by ReAct Africa to initiate small projects across different sectors. The ReAct toolbox was also mentioned as a source of information for AMR related information by participants.

The training provided in leadership, advocacy and the overview in project management and resource mobilization were the helpful skills by ReAct Africa programs identified by the participants. Many participants mentioned about how ReAct Africa conferences provided them with the opportunity to network and collaborate with experts in the field of AMR. As one participant put it, "The most rewarding experience, I must say are the international conferences. It is from these conferences that we got better connections, peers, and all that."

What changed for the participants through ReAct programs.

One of the important changes that happened after participating in the programs were the increase in knowledge about AMR. It provided greater understanding about the social and economic dimensions of the problem, along with the need to adopt the 'one health' approach. A few participants commented that participating in ReAct programs gave them greater visibility and opened opportunities in the policy space. This is summed up in the following words by one of the participants.

"We shared our experiences in youth engagement session [during ReAct Africa conferences]. This helped me to be in knowing terms with the leadership [...] and also elected as the regional coordinator of the action group of Civil society organizations on AMR for West Africa, for the quadripartite. [...] I also got selected to be part of the quadripartite working group on youth engagement on AMR [...] great thanks to ReAct Africa for investing in us, and for the support they gave us.

Participants are involved in meaningful activities that can contribute towards AMR mitigation.

All participants have commented that they continued to be in AMR related activities after attending the AMR programs by ReAct Africa. One of the most common initiatives was community engagement which included activities such as creating awareness among public about AMR mitigation. Some participants focused on specific sectors such as engaging with school children, religious groups etc. by organizing webinars and conferences. A few participants had contributed through policy engagement and research activities.

Participants in youth program got the opportunity to be associated with AMR National Action Plans

• I had the privilege [...] to gain leadership positions [...] in one health, other health-related organizations etc. and a chance to be an African representative [in one of the international students' alliances and health alliance [...] I had the privilege to be the President of Students' one health innovation in Tanzania which actually gave me the opportunity to be one of the pioneers contributing to the formation of our National action Plan in Tanzania [...] All of these achievements was not possible if I didn't make it to the first program - Youth AMR leadership program by ReAct Africa where they taught us [...] where to concentrate. **JN Id participant from Kenya**

•. It gave us the attention we needed, and [...] we are now represented at the National AMR Subcommittee that is responsible for drafting National Action Plans (NAPs) in Uganda and I can categorically say that it occurred because of what you have done to the youths in Uganda. I am now in the technical working committee responsible for awareness, education, and Training, and I was part of the team that validated NAP 2.0. All this would not have been possible without ReAct, and for every activity that we were part of, ReAct has always been there. **DT Id participant from Uganda**

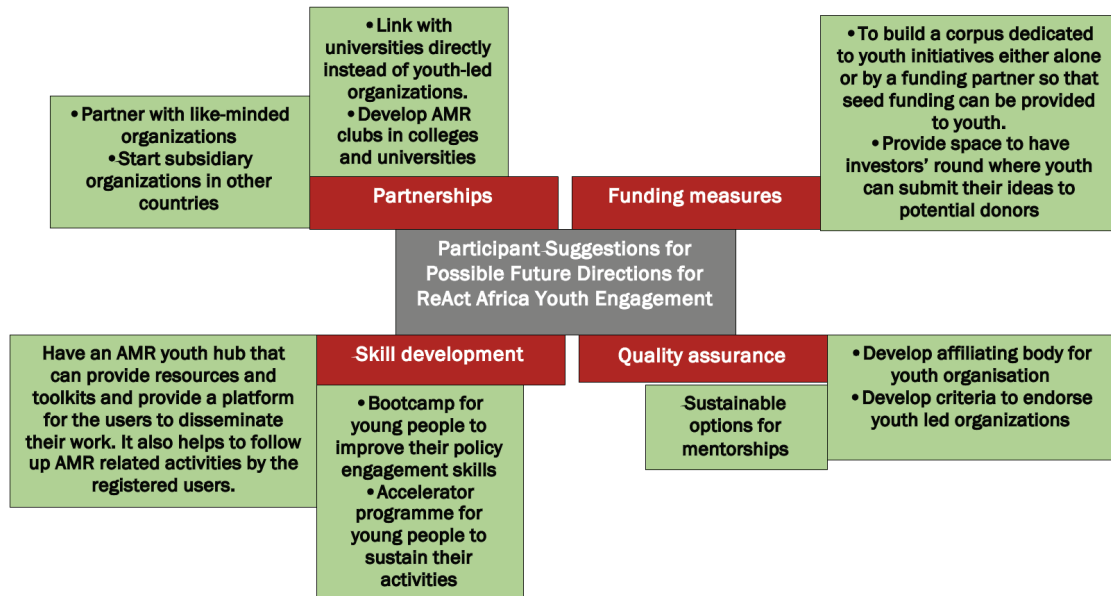
4.2.2 Challenges faced by the youth initiatives.

The participants came up with many challenges and limitations that affect the youth led initiatives. One of the main hurdles pointed out by many participants was **the lack of resources, especially financial** that would make many of the activities redundant over a period. Besides, they had also pointed out that the **skills they gain were not enough** to engage the diverse stakeholders that needed to be addressed in this field. A few participants identified AMR as a behavior change issue because of which **community would not perceive it as something that needed immediate attention**. This made many of the community awareness programs a wasteful exercise as they fail to bring a fundamental change in people's practices. Furthermore, there would be a **shortage of essential antibiotics at the local level**, which exacerbates the difficulty of handling AMR. As one participant has highlighted – "They [the prescribers] do the correct thing, like maybe prescribing the appropriate drugs. [...] I think in the last two weeks in the place that I work, there's a patient who keeps coming, for antimicrobials that are not there."

4.2.3 Suggestions from participants for ReAct Africa

The participants had provided many suggestions to ReAct Africa regarding the future direction that it should take. These could be broadly classified under 4 headings - partnerships, funding measures, skill development and quality assurance which was summarized in **Image 6**.

Image 6: Suggestions from the evaluation participants



ReAct Africa should teach behavior change model to the youth participants attending their programs.

"When we go to do advocacy, we make efforts to ensure that they understand the message correctly. But go again the following week, they would have forgotten or not just that, they will still repeat their [old] practices in antibiotics. [...] AMR is a social and behavioral change issue, and we need to [...] ensure that we include behavior change models in our approach, I think that has not been touched enough [in RAN programs]. If people do not have that fundamental change in them to ensure that I would finish my medications, I would not share them with my neighbors and so on, what is the point about our awareness program? Human decision making is a bit complex, right? People don't generally consider cost and benefits anymore from a self-interest perspective. They just want to be influenced by context and most times we assume that people know what is good for them and they are aware of the negative effects of what they are doing. So we need to ensure that we are able to generate the demand from them. We need to ensure that our messaging campaigns in AMR are engrossed in terms of behavioral change, we need to see how we can bring in other disciplines like psychology, sociology, and ensure that all our campaigns, all our messages, are targeting behavior change right? [...] We need to understand the root cause of the drivers of AMR in our communities. So [...] I'm proposing to ReAct Africa to do more training in terms of social behavioral change [...]. Give them knowledge on how they can incorporate some of these behavioral change models in the AMR advocacies & e-mail campaigns. And this will help us to ensure that when we are going for awareness programs [...] in the community and they will be able to sustainably adopt the messages across themselves".

Speaker 3, FGD 2.

5. Conclusions and Lessons Learnt

5.1. Conclusion

ReAct Africa's initiatives have proven to be effective in mobilizing young people to actively contribute to the fight against AMR. The high level of knowledge shown by the youth involved in these programs is not only promising but also indicative of their capacity to become influential agents in addressing this global health issue. By empowering young people with the tools and knowledge to combat AMR, ReAct Africa is creating a generation that can make lasting contributions toward this cause. It is important to notice the sustained involvement of participants in AMR-related activities, even when they are not part of any programs. This ongoing commitment speaks to the effectiveness and impact of ReAct Africa's approach, as these young advocates continue to champion AMR awareness in various capacities. Many have gained visibility and unique opportunities within policy spaces, allowing them to influence public health strategies and advocate for AMR action at higher levels. This visibility not only benefits the individuals but also reinforces the credibility and reach of ReAct Africa's work.

The confidence displayed by participants as they engage with diverse audiences—ranging from school children to religious communities and the general public—highlights the adaptability of the training they received. Through webinars, grassroots campaigns, and community-based activities, these young advocates are successfully spreading AMR awareness across diverse sections of the society, thus broadening the scope of ReAct Africa's initiatives. This adaptability reflects the comprehensive nature of the program, which equips participants to communicate effectively with each distinct stakeholder. Engaging youth in AMR initiatives not only enhances their knowledge, but also foster a strong commitment towards health advocacy and leadership. This long-term dedication is essential for sustaining AMR mitigation efforts, as it creates a pipeline of leadership talent who can drive AMR initiatives well into the future. Their fresh perspectives and ingenious approaches contribute to the continuous evolution and adaptability of strategies against AMR, ensuring the relevance and longevity of these efforts.

The youth-led initiatives can transcend knowledge and awareness and have the potential to inspire others in their communities to join the fight against AMR. By investing in young people, ReAct Africa is not only addressing the current challenges of AMR but also building a foundation for a healthier, more resilient future where communities are well-equipped to handle public health threats. In conclusion, ReAct Africa's youth-centered approach is both effective and impactful, as it cultivates a new generation of health advocates committed to tackling AMR with innovative and inclusive solutions. This model not only supports the immediate goals of AMR mitigation but also aligns with the broader vision of empowering communities to respond effectively to global health challenges.

5.2. Lessons Learnt

This report demonstrated tangible outcomes to ReAct Africa's initiatives which validated the need for capacity building, knowledge dissemination and adoption of inter disciplinary approaches in tackling AMR. The participants continued engagement in AMR related activities beyond the program participation was highlighting the sustainability component of the initiatives.

Key insights gained from the report reveal several areas essential to strengthening AMR initiatives:

1. **Capacity Building as a Cornerstone:** Equipping participants with robust knowledge and skills in AMR has empowered them to become advocates and leaders within their communities. This knowledge foundation not only bolsters individual capacities but also enhances the overall resilience of the health systems they are part of, supporting a more sustainable approach to AMR mitigation.
2. **The Value of Knowledge Dissemination:** Spreading information on AMR through targeted workshops, seminars, and resources has increased awareness among diverse stakeholders, from healthcare professionals to community members. This broad-based knowledge dissemination strategy ensures that information reaches those at multiple levels of influence, creating a ripple effect that strengthens public health outcomes.
3. **Interdisciplinary Approaches for Comprehensive Impact:** The activities that came through after attending various ReAct youth initiatives and diverse participation from various sectors in its programs demonstrate the value of collaboration across various sectors—including healthcare, agriculture, and education—to address AMR in a holistic manner. By breaking down silos and

encouraging interdisciplinary cooperation, ReAct Africa's initiatives align with the One Health approach, recognizing the interconnectedness of human, animal, and environmental health in combating AMR.

- 4. Incorporating Youth Voices for Innovative Solutions:** The engagement of youth in AMR initiatives is vital, as they bring fresh perspectives, creativity, and a strong drive for change. By prioritizing youth involvement and amplifying their voices, ReAct Africa has fostered a platform for innovative and inclusive solutions to public health challenges. Engaging young people also helps in cultivating a new generation of AMR champions who can lead future efforts in this field.
- 5. Sustainability and Continued Engagement:** The ongoing participation of program alumni in AMR-related activities reflects the lasting impact of ReAct Africa's efforts. This sustained engagement highlights the importance of designing programs that not only impart skills but also inspire a long-term commitment to the cause, ensuring that the momentum built through various programs continues to drive change well beyond the defined duration of each initiative.

Besides underscoring the effectiveness of ReAct Africa's strategies, the findings emphasized the need for incorporating youth voices while addressing health challenges using innovative and inclusive strategies.

5.3 Limitations of the Report

This report has undoubtedly provided valuable insights into the outcomes of ReAct Africa's youth initiatives. However, it is important to note some of the limitations of this report to contextualize the findings and guide future evaluations.

- 1. Limited Diversity of Survey Participants:** The survey respondents were primarily from human health background, which did not fully represent the range of students who participated in ReAct Africa's initiatives. This might have caused a response bias, especially in areas related to non-human health sectors and could explain some of the negative responses regarding interdisciplinary questions. In future surveys, efforts should be made for a broader participant pool and to assess if there is any pattern in responses, which would be an indication to revisit the content of various initiatives.
- 2. Time Constraints in Data Collection:** Gathering data from participants posed a significant challenge due to time constraints. Many respondents were engaged in various activities, including academic and work-related commitments. Balancing data collection with the participants' busy schedules, especially during working hours, required careful consideration to avoid disrupting their studies or professional responsibilities. This time limitation likely affected response rates and the depth of feedback obtained.
- 3. Lack of Program-Specific Evaluation:** The report did not differentiate the effectiveness caused by each youth program by ReAct Africa. For example, the impact created by AMRLEP might be different from AYARA-TF. By analyzing the performance and reception of individual programs, valuable insights on how to strategically allocate resources could be gained. This would contribute towards prudent decision making on enhancing those initiatives that deliver the greatest change.
- 4. Impact of External Variables:** The report did not really delve much into external variables that might have influenced participants' responses, such as exposure to AMR-related content outside of ReAct Africa's initiatives, or differing levels of engagement in various AMR activities. These factors could affect how participants perceived and responded in various data collection methods adopted, potentially impacting the accuracy of the findings.

6. Key Recommendations

The participants had highlighted key challenges faced by them and suggested a few recommendations which ReAct Africa could adopt in terms of future directions. A few recommendations are given below based on the findings that will help in sustaining the momentum while creating opportunities for young people in taking up AMR mitigation roles.

6.1. Short term recommendations

To enhance capacity building programs

- ReAct Africa should continue to deliver training programs that impart basic knowledge and skills on AMR among youth. Following the 'One Health approach' these programs could focus more on preventive strategies, advocacy techniques and explore the possibilities of behaviour change communication. Additional efforts should be put in to include participants from more countries within the region. As a first step, conducting programs in regional languages will help support youth from remote and linguistically diverse areas to effectively engage and act on AMR issues.

To Leverage on peer review and learning

- ReAct Africa is on the right track in this aspect through the development of AMR hub which would serve as an online platform for networking, mentorship, collaboration, learning, exchange of ideas and knowledge dissemination. Even the AYARA-TF would bring all youth organisations under one roof which would help strengthen youth voices, share challenges, and co-create solutions. Such initiatives would provide a supportive community that would allow youth to collaborate across borders, sharing best practices and innovative approaches, and update progress.

6.2. Long term recommendations

To foster leadership in health advocacy

- **by building partnerships for formal leadership training:** ReAct Africa could collaborate with academic institutions, government organizations, and CSOs to design and implement formal leadership programs. These programs should equip youth with advanced skills in health advocacy, public health policy, and strategic communication. By training in these competencies, the youth could gain the knowledge, confidence, and authority needed to drive change not only in AMR but also in other health issues.
- **by creating pathways for young leaders:** ReAct Africa could start offering small scale scholarships and fellowships as part of some of its programs such as the AMRLEP, encouraging young leaders to further their education and professional development in AMR advocacy. This would further strengthen existing programs leading to the emergence of strong and committed leaders in AMR.

To expand policy influence and integration

- **by promoting institutionalized youth participation:** Develop structured pathways for youth participation in national and regional AMR initiatives, such as AMR NAPs and steering committees. Advocate for policies that mandate and normalize youth inclusion in AMR at all levels of governance. Through these measures governments and organizations can ensure that youth voices become an enduring part of AMR governance, leading to more sustainable and inclusive decision-making processes.

To strengthen funding and resource support

- **by creating self-sustaining models for youth initiatives:** Explore opportunities to transition youth-led AMR initiatives into self-sustaining models through social enterprise approaches. This might involve developing business models where proceeds from services or products are reinvested into AMR programs, creating long-term financial independence and sustainability.
- **by integrate youth AMR programs into community-based initiatives:** Encourage the integration of youth-driven AMR activities into broader community health programs, leveraging existing resources and community trust to strengthen reach and impact. By aligning youth initiatives with well-established community programs, such as those for tuberculosis, malaria, or HIV, their efforts in AMR could gain additional visibility and support, enhancing both sustainability and community relevance.
- **by diversifying funding sources:** Engage with international donors, corporate sponsorships, and philanthropic organizations to secure funding streams for youth AMR programs. By establishing diverse funding sources, youth initiatives can gain financial stability, access necessary resources, and scale their activities more effectively over time.

6.3. Other youth initiatives in health

Following are examples of a few models in which youth are engaged in various health initiatives from which ReAct Africa can draw inspiration from while moving forward.

Examples of Youth Initiatives in Health	
Youth participation in health advocacy https://rb.gy/udr24w	U-Report platform is a powerful tool by UNICEF intended to enhance youth participation in health advocacy. Launched as a free social messaging platform, it allows youth to participate in polls, surveys, and discussions on various topics, including public health, in real-time. One of the key strengths of U-Report is its ability to reach a broad and diverse audience. The data can then be used to inform policy decisions and drive community-level change. It also acts as an educational tool, providing users with accurate information about health topics, including disease prevention, vaccination, and hygiene practices. This dual function of education and advocacy not only raises awareness but also motivates youth to act in their communities.
Youth in decision-making https://youngoclimate.org/	YOUNGO, the official youth constituency of the UNFCCC, empowers young people to participate in global climate decision-making. Established in 2009, YOUNGO is a network of youth-led organizations that engages in policy advocacy, capacity building, and awareness-raising to influence climate negotiations. Through drafting interventions, lobbying negotiators, and organizing events, YOUNGO ensures that youth perspectives are included in UN climate conferences (COPs). Despite challenges like limited resources and access, YOUNGO's efforts have increased the visibility of youth voices in climate policy. Their innovative ideas and grassroots initiatives contribute to global climate solutions, proving that youth are crucial stakeholders in the fight against climate change. YOUNGO is funded through a mix of member contributions, grants, and donations from international organizations, NGOs, and foundations. It also partners with various entities, including UN bodies and the private sector, which provide financial support and logistical assistance. Additionally, YOUNGO occasionally uses crowdfunding to fund specific activities, such as attending climate conferences. This diverse funding approach helps sustain its operations and advocacy efforts while maintaining independence.
AMR hub https://globalamrhub.org/	The Global AMR Hub, an international collaborative platform, brings together a wide range of stakeholders, including governments, international organizations, academia, and civil society, to coordinate efforts and share knowledge in the fight against AMR. The hub focuses on fostering global collaboration, promoting data-driven approaches, and facilitating the exchange of best practices and innovations in AMR research, policy, and implementation. By serving as a central repository of information and a network for collaboration, the Global AMR Hub plays a critical role in advancing the global response to AMR, ensuring that efforts are unified, informed, and effective in combating this pressing public health challenge.



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