



June 2022

AMR IN THE POST-PANDEMIC ERA

The Global Respiratory Infection Partnership (GRIP) celebrated its 10 year anniversary in 2022.

To signify this important milestone in May this year, GRIP members met in person and remotely to discuss the global problem of Antimicrobial Resistance (AMR) in the post-pandemic era. A local perspective was provided by expert physicians on how Romania is tackling the AMR challenge and the group identified how health literacy principles can enhance the impact of interventions in curtailng AMR.



ATTENDEES

GLOBAL RESPIRATORY INFECTION PARTNERSHIP (GRIP) MEMBERS

Prof. Sabiha Essack, Chair of GRIP

South African Research Chair in Antibiotic Resistance and One Health and Professor in Pharmaceutical Sciences, University of KwaZulu-Natal (UKZN), South Africa

Prof. Attila Altiner

General Practitioner, Head of the Institute of General Practice at the University of Rostock

Mr John Bell (remote)

Principal Advisor to the Pharmaceutical Society of Australia Pharmacy Self Care Programme; Practitioner/Teacher in Primary Health Care at the Graduate School of Health, University of Technology Sydney, Australia

Dr Doug Burgoyne (remote)

Adjunct Associate Professor at University of Utah College of Pharmacy and former President and CEO of Veridicus Health

Dr Alike van der Velden

Assistant Professor, University Medical Centre Utrecht, Netherlands

Professor Roman Kozlov (remote)

Chief Specialist Ministry of Health at Russian Federation on Clinical Microbiology & Antimicrobial Resistance

Dr Sergio Caretta

Founder and Director of the Centre for Respiratory Disease in the State of Mexico, President of the Mexican Society of Otolaryngology Head and Neck Surgery

Dr Martin Duerden (remote)

Fellow of the UK Royal College of General Practitioners, and Medical Adviser, Centre for Medical Education, Cardiff University

Prof. Antonio Carlos Pignatari (remote)

Professor of Infectious Diseases and Director of the Special Clinical Microbiology, Laboratory of the Division of Infectious Diseases, Federal University of São Paulo, Brazil

Dr Aurelio Sessa

Family Physician and Senior Partner, Varese, Italy. Italian College of General Practitioners and Primary Care (SIMG)

Dr Wirat Tongrod

Lecturer at the Faculty of Pharmaceutical Sciences and Former Dean Assistant at The Graduate School, Huachiew Chalermprakiat University

Prof Khalid Eljaaly (remote)

Associate Professor and Infectious Disease Pharmacy Consultant, King Abdulaziz University and Hospital, Saudi Arabia

Prof Elsa Lopez-Pintor (remote)

Assistant Professor, Department of Pharmacy and Pharmaceutical Technologies, Miguel Hernandez University, Alicante, Spain, and Biomedical Research Networking Centre for Epidemiology and Public Health (CIBERESP) Madrid, Spain

GUEST KEY OPINION LEADERS

Dr Mihai Craiu

Head of Emergency Department of Alfred Rusescu Children's Hospital, Bucharest National Institute of Family Medicine

Dr Gabriela Musat

Primary ENT Physician, Doctor of Medical Sciences. Associate Professor, ENT Discipline, Faculty of Dentistry, UMF "Carol Davila" Bucharest Romanian Society of Rhinology

Kristine Sørensen

Founder of the Global Health Literacy Academy, President of the International Health Literacy Association and the executive chair of Health Literacy Europe

Dr Adriana Antohe

National Society of Family Medicine

Dr Ileana Brinza

Romanian Association for Paediatric Education in Family Medicine (AREPMF)

Dr Vlad Budu

Primary ENT Physician, Doctor of Medical Sciences

RECKITT PARTICIPANTS

Adrian Shephard

Global Medical Marketing Director

Graça Coutinho

Global Medical Lead Respiratory

Dr Dumitru Lupliasa

University professor, Pharmaceutical Technology and Biopharmacy, Faculty of Pharmacy, "Carol Davila" University of Medicine and Pharmacy Bucharest

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ENT Primary Care Physician
Head of ENT Clinic "Sfânta Maria" Clinical Hospital, Bucharest
Head of ENT Discipline Faculty of Dentistry, UMF "Carol Davila", Bucharest

Anca Crupariu

Pharmacist, National Medicines Agency (Romania)

Dr Gabriela Comisel

Primary Care Family Medicine Physician

Laura Cârstea

Medical Affairs Manager, Romania

Mădălina Mihalcea

Junior Medical Manager OTC, Romania



A SPOTLIGHT ON AMR IN ROMANIA

Romania ranks 7th globally for the consumption of daily doses of antibiotics (DDDs), per inhabitant. Against this backdrop, professional societies in Romania and the local Reckitt team have played a leadership role in creating initiatives that have reduced national rates of antibiotic consumption and educated the public on tackling the challenge of AMR. With this backdrop, GRIP chose Bucharest as a destination to discuss AMR in the post-pandemic era, and explored:

- Why AMR is an urgent issue in Romania
- How antibiotics are accessed in Romania
- Insights from local health experts involved in Romanian AMR initiatives

“ The healthcare system in Romania ranks one of the lowest in the EU in terms of preventable mortality and access to innovation. Romanian public healthcare expenditure remains among the lowest in EU also, with 4.6% of the GDP estimated in 2019.¹

Ms Laura Carstea, a pharmacist by profession and Medical Affairs Manager, Romania at Reckitt.





THE CHALLENGE OF AMR IN ROMANIA

Antibiotic use across the country is extremely high; over 50% of patients entering the pharmacy go directly to the counter, seeking advice and treatment². Unfortunately, it is common practice that patients obtain antibiotics upon their request without a prescription when suffering with a respiratory tract infection. With incidence high, 7 out of 10 Romanians having had a respiratory tract infection at least once in the previous year, the potential for inappropriate use for self-limiting viral respiratory infections is high.

Assoc. Prof. Gabriela Musat speaking on behalf of the Society of Rhinology built upon the picture of AMR in Romania during her presentation entitled *'Responding to the Growing Threat of Antibiotic Resistance in Romania'*. Prof Musat helped orientate the group around a CDC report from the US which outlines AMR, profiling 18 species of bacteria and fungi resistant to antibiotics and their category of effect (urgent; serious; alarming). Within Romania, there are high rates of resistance in *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Moraxella catarrhalis*, *Staphylococcus aureus* and Group A streptococcus (GAS). The recent report *'Responding to the Growing Threat of Antibiotic Resistance in Romania'* further demonstrated the high antibiotic use in Romania, outlining that levels of consumption for systemic use exceed the European average by 21.8%. Prof Musat went on to discuss what actions had been undertaken to combat AMR.

Assoc. Prof. Dr. Mihai Craiu, National Institute of Family Medicine, explored the relationship between AMR, vaccinations and emotional decision-making in his presentation entitled, *'Antibiotic prescribing in respiratory diseases in Romania - A continuum from parental perception to GP/paediatrician'*. Dr Craiu explained low vaccination rates in Romania were attributed to fear of illness, a situation further complicated by irrational fears around the pandemic, some of which was exacerbated by social media influencers who were ill informed on the facts.

Trust is also an issue between prescribing HCPs, pharmacists and patients in Romania, said Dr Craiu. Some 74% of people who are confronted with a health issue consult online forums and social media resources before they interact with a GP. In local areas, select social media influencers promoted the use of antimicrobials to treat COVID-19, instead of recommending vaccination and antiviral treatment for COVID-19. This resulted in a sharp rise in antibiotic use, low immunization uptake and increased deaths during the pandemic.

“ The experience of antibiotic use in Romania illustrates that knowledge, digital literacy, healthcare access and cost drive disease-related behaviour and perception of need for antibiotics. ”

Dr Craiu

Dr Craiu concluded that health literacy training for HCPs is essential to ensure health information is communicated through the patient voice.

“ Specifically, patient language because most stakeholders that are interacting with doctors in Romania complain about complex terminology. ”

Dr Craiu

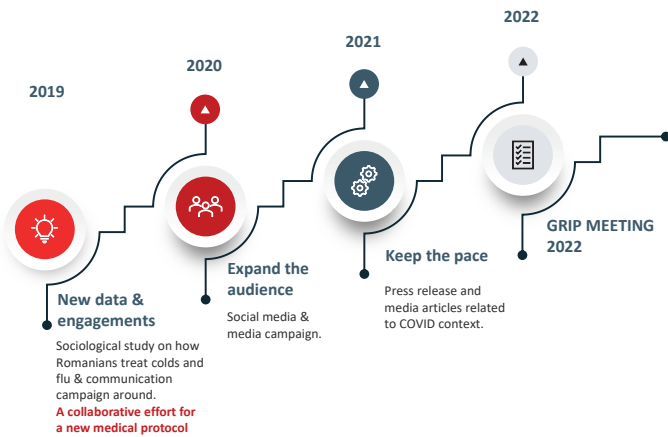
PHARMACY IMMERSION

The backdrop set by Ms Carstea and on-the-ground experience through local pharmacy visits gave GRIP members a sound understanding of how accessible antibiotics are in Romania.

Ms Carstea illustrated the pharmacy landscape in Romania stating that there are 7386 pharmacies nationally and many pharmacies can be found in just one square mile as 97% of the population use pharmacies and 90% of these patients visit at least once a month. Members reflected on their visits feeling that the pharmacists were under-appreciated in their role as an antimicrobial steward and in mitigating antimicrobial resistance. They are in a difficult position because patients often insist on antibiotics, and an emergency antibiotic legislation operates where a patient can legitimately demand an antibiotic for emergency use from a pharmacist. So pharmacists feel compelled to dispense the antibiotics, even when they are aware they aren't necessary.

In recognising the difficulty faced by pharmacists, it will take a collaborative effort to work with policymakers to reduce the availability of antibiotics without prescription and provide support and education to both pharmacists and patients.

Figure 1: Timeline showing Reckitt and Romanian Society of Rhinology's activities to tackle AMR



A COLLABORATIVE APPROACH TO COMBATTING AMR IN ROMANIA

The Romanian Society of Rhinology have partnered with Reckitt to develop proactive and successful approaches in response to the threat of AMR in Romania shown in figure 1.

In 2019, A sociological study found that 4.5 million Romanians treated the common cold and sore throat with antibiotics. This started a national conversation about the dangers of antibiotic resistance with millions of people reached and thousands of online interactions. Since then, there has been a continuous effort to respond to the growing threat of AMR.

Several activities were undertaken, including:

- **Awareness campaign** - results of the study were communicated through a campaign in print and digital media
- **Round table** - members of Medical Societies, members of Parliament, representatives of Ministry of Health, and mass-media gathered to discuss the results
- **Memorandum new protocol** - a memorandum for a new protocol for treating respiratory infections was created

Results of activation



More than **8.6 million** people reached



More than **50,000** online reactions



More than **10 TV** prime-time mentions



The commitment of **10 Medical** associations

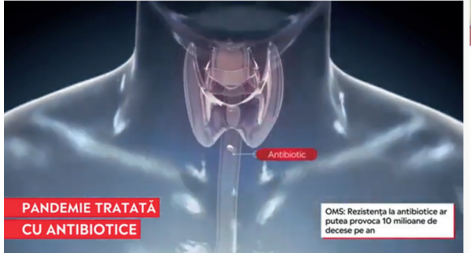
A CLOSER LOOK AT DIGITAL ACTIVATION

The local Romanian team leveraged experience of digital literacy among the Romanian population and developed a campaign with broader online influencers to spark conversations and engage with patients through social media. This enabled an expansion of reach to a broader Romanian population during a time when symptoms of respiratory tract infections were often being confused with COVID-19. To combat confusion and raise awareness of appropriate treatments, five top influencers from Romania posted videos and photos opening their medicine cabinet to discuss appropriate antibiotic use.

Engaging with online social media influencers highlighted the opportunity of communicating with patients through the experience sharing by patients themselves. The scope and reach of online campaigns for public health awareness and education had a significant impact, with over **five million people** across Romania engaging with digital content. The Romanian team have continued activating media spaces with articles, press releases and interventions on TV shows. This has seen over **four million people across Romania** engage with accurate health information in appropriate antibiotic consumption. Dr Craiu concluded that:

“ Social media education is one tool that could be used in Romania if digital literacy can be improved by teaching users how to recognise fake news that can lead to a negative change in behaviour. ”

Dr Craiu





THE IMPORTANCE OF HEALTH LITERACY IN COMBATTING AMR

Health literacy is increasingly being recognised as important for behaviour change and is necessary for informing the decisions around treatment choice. The Romanian physicians echoed this sentiment during the meeting and highlighted the importance of health literacy in contributing to reduced antibiotic consumption within populations. During the meeting, GRIP welcomed health literacy expert Kristine Sørensen from the Global Health Literacy Academy who discussed the key principles of health literacy and how GRIP could integrate them into patient and HCP resources.

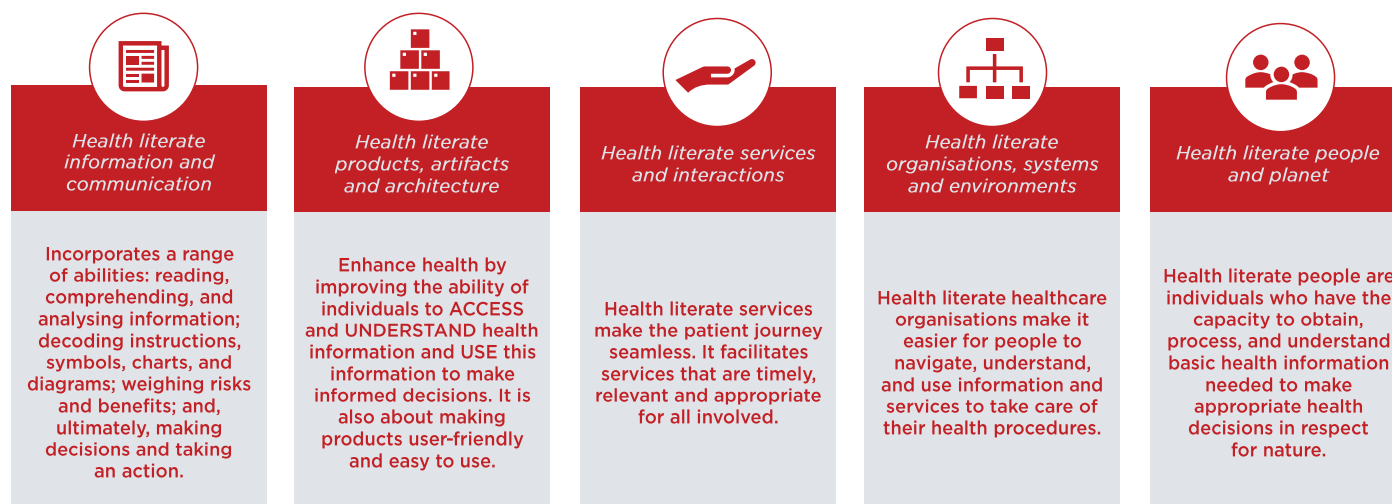


Kristine Sørensen outlining key principles of Health Literacy in AMR

“ Health literacy entails the knowledge, motivation, and competencies to access, understand, appraise and apply information to form a judgement and make decisions regarding health care, disease prevention and health promotion in everyday life to maintain and promote quality of life during the life course. ”

Sørensen et al., 2012

Health literacy is content and context-specific, impacting how patients access health systems, consumption of treatments and personal empowerment. Ms Sørensen outlined Health Literacy by design™ which demonstrates five core pillars:



Within AMR, an individual’s personal beliefs, knowledge, motivation, and competencies influence their decision-making, said Ms Sørensen. Therefore, increasing health literacy regarding appropriate antibiotic use across populations could have a direct impact on levels of consumption.

GRIP members discussed the opportunity to use more health literacy principles in GRIP materials and whether there is a need to add a health literacy expert to GRIP who audits materials before dissemination to make sure content is at a suitable health literacy level for the target audience.

This session also sparked discussion on the lack of focus directed to how academic institutions teach new medical professionals how to communicate with patients and there was agreement that more work is necessary in this area. Workshop participants agreed that there is a need to go deeper to understand the true barriers to patients achieving behaviour change in antibiotic use and health literacy can be used to explore this.

The ideation process generated a wide range of ideas on how to improve health literacy concerning AMR. The ideas were sorted according to the five pillars of the health literacy by design blueprint and analysed to generate insights on how GRIP could move forward.

GRIP could develop health literate information that delivers simple and consistent information in lay terms through channels used today such as social media, leaflets, newspapers, posters, radio and TV. This would enhance knowledge and understanding and reflect at-risk factors related to socio-economic status, education, ethnicity, minority and health service use.



Members and meeting guests in a breakout group activity

Participants suggested that GRIP could lead health literacy action in understanding AMR by developing tools for shared decision-making, lobbying pharmaceutical companies to report on the consequences of inappropriate antibiotic use in information sheets of antibiotics and then using webinars to have direct integration and collaboration with patients.

Finally, outputs suggested that GRIP should have a greater focus on convincing policymakers about the importance of health literacy as a tool to fight AMR and ensuring proper health literacy knowledge dissemination between and in administrations.



AMR: ONLINE ENGAGEMENT

Participants were given an overview of a recent social media listening report (SML), commissioned by Reckitt, that explored what the general public currently talks about in the context of sore throats, antimicrobial resistance and how COVID-19 has altered the discussion around antibiotic use in sore throat. This included perceptions and misconceptions among patients and the general public.



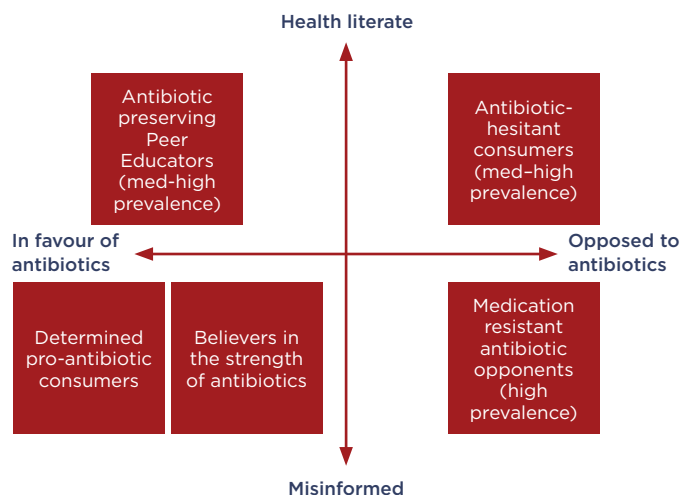
GRIP members and meeting guests listening to the SML report

GRIP members heard reflections on how COVID has had a pronounced, complicating effect on the global sore throat and AMR conversation. Insights suggest that patients' perceptions of sore throats heightened during the pandemic due to fears of infection with COVID-19. However, this has led to the public engaging in conversations around antibiotics and the distinction between viral and bacterial infections in the context of COVID, possibly indicating higher awareness. Given that public health has become a larger immediate concern in the face of the pandemic, there is a perception that individuals can relate better to the challenge of a large-scale public health crisis such as AMR. GRIP members expressed that this presents a unique opportunity to raise awareness and education as peoples' appetite for health information is greater.

Insights from the presentation sparked reflections amongst GRIP members regarding opportunities to leverage health literacy principles and the wide range of stakeholders influencing the

AMR conversation, including Public Educators who seek to shape societal perceptions. Many GRIP members commented on the impressive innovative work that had been done and how the data could be further analysed for even more granularity by economic development status and country nuances.

In addition, the social media listening highlighted that public and patient opinion about antibiotic use in sore throat were multifaceted, largely sitting in four key groups and influenced by their health literacy level.



In addition, insights showcased that within these five groups there is a wide spectrum of opinions predicated upon misconceptions.

Misconceptions recorded in SML



Antibiotics are strong medications which are more effective at treating my sore throat [regardless of whether it is viral or bacterial]



Antibiotics will help me get better more quickly



If I take too many antibiotics or don't take them properly, I might catch AMR

INTERVENTION POINTS

GRIP members found the data very insightful, in particular the more neutral and negative sentiment of the public & patient opinion about antibiotic use in sore throat conversation online. Language was identified as a key area to explore with different audiences around the world. For example, when discussing sore throat, a healthcare professional's linguistic style is more attributed to formalised, medical terms versus an online influencer who discusses sore throats in a way that appeals to a wider population. GRIP member Prof Altiner remarked that there is an opportunity for GRIP to intervene within these conversations and individualise messaging based on the patient segments 'As individuals are at different points in making up their minds'.

The social media insights indicated that a wide range of stakeholders influence the AMR conversation online, including Public Educators who seek to shape societal perceptions of antibiotic use in sore throats and upper respiratory tract infections. Additionally, peer educators, TV presenters, politicians and other celebrities frequently post or comment on social media campaigns aimed at combatting antibiotic overuse.

GRIP Chair, Prof Sabiha Essack noted that:

“ The results of this study present an exciting opportunity for GRIP to lead a new dialogue helping Health care professionals better inform patients by identifying where and how conversations are taking place to formulate peoples' beliefs on sore throats and AMR. ”

Prof Essack went on to say:

“ Moving forward, GRIP using social media, peer educators/ influencers is the way to go but caution must be taken with misinformation and disinformation that does more harm than good. ”



FUTURE FOCUS FOR GRIP

GRIP Chair Prof Sabiha Essack closed the meeting by reflecting on the last 10 years of GRIP and recalling sitting in the Royal College of Physicians on a very rainy day coming up with the name and declaration and all GRIP members committing to evidence-based advocacy and intervention in antibiotic use and stewardship.

Over the last decade, GRIP have sought to raise awareness of AMR and provide practical advice and tools for patients, pharmacists, physicians, policy makers and partners in the battle to change behaviours and reduce inappropriate antibiotic usage for respiratory tract infections. This has taken many forms, from scientific conferences and meetings, stakeholder engagement, educational events, publications and toolkits.



Chair of GRIP, Prof Essack, closing the meeting

Throughout 2020–21, GRIP has been actively involved in advocating antimicrobial stewardship and continues to engage in activities that champion appropriate antibiotic use. GRIP’s momentum has not been affected by the pandemic. It has actually increased with over 100 publications, many national interventions and surveillance initiatives related to AMR by GRIP members and affiliates as well as the 5 GRIP organised webinars that have taken place. Focusing on the future, GRIP members discussed ambitions for 2022 and beyond.

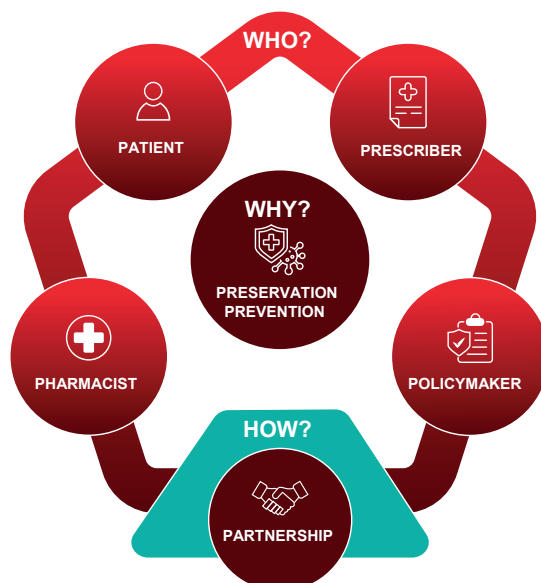
Based on discussions had over the two-day meeting, conversations orientated toward how GRIP could learn from regional efforts in Romania and utilize social media and health literacy in other regions around the globe.

Key themes emerged around the need for:

-  Continued value in global and regional partnerships
-  Expansion of GRIP member groups into local regions
-  Integration of health literacy principles
-  Engagement with online communities

Reflecting on the need to evolve in the post pandemic era GRIP members decided to update the 5P framework putting greater emphasis on partnership with other stakeholders underpinning the framework to enable the preservation of antimicrobials and the prevention of antimicrobial resistance.

5P FRAMEWORK FOR CHANGE:



Chair of GRIP Prof Essack remarked:

“ It’s not about reinventing the wheel; we rather want to make sure that we are complementary to other efforts that are being done in AMR. ”

The GRIP meeting in Bucharest highlighted that despite heightened awareness during the pandemic, inappropriate use of antibiotics continues, which if not addressed, will cause significant disruption to health care delivery globally. GRIP activities are continuing to play an active role in driving conversations and sharing learnings as we collaborate to combat AMR.



GRIP Members From left to right: Physical – Sergio Caretta, Aurelio Sessa, Sabiha Essack, Alike Van der Velden, Atilla Altiner, Wirat Tongrod. Remote – John Bell, Doug Burgoyne, Khalid Eljaaly

In the immediate future, Reckitt is focused on delivering a White Paper publishing the results of the Social Media Listening, exploring patient segments and discussion around antibiotic usage in sore throat. Reckitt also supports the Pharmacy partnership between Reckitt, GRIP and the International Pharmacy Federation (FIP). Adrian Shephard, Global Medical Marketing Director for Reckitt, is 'keen to continue the momentum in driving awareness of self-care and behaviour change to reduce inappropriate and ineffective use of antibiotics for self-limiting respiratory conditions like sore throat where evidence-based symptomatic relief often offers the most appropriate and effective solution.'

To close the meeting, Adrian Shephard, Global Medical Marketing Director for Reckitt remarked:

“ This meeting has highlighted how we may go further with our partnerships from a 5P framework, and extend the core group of GRIP members out into broader partnerships, because the threat of AMR requires a collaborative effort to address it. ”



GRIP DECLARATION

To reflect this greater focus on partnership
the GRIP Declaration has been updated

GRIP DECLARATION:

Global Respiratory Infection Partnership (GRIP)

Recognising the escalating burden of AMR and the imperative to maintain the efficacy of antimicrobials, GRIP is committed to:



Evidence-based advocacy and interventions to optimise antibiotic use and stewardship amongst **prescribers, pharmacists and patients**



Facilitating the implementation of **policies** to advance antimicrobial stewardship



Promoting appropriate self-care with symptomatic treatment options for upper respiratory tract infections



Fostering health literacy to enable the **preservation** of antimicrobials and **prevention** of antimicrobial resistance in **partnership** with other stakeholders



REFERENCES

1. State of Health in the EU Romania Country Health Profile 2019
2. European Commission (2017), *Commission Staff Working Document Country Report Romania*
3. Sørensen, K., Van den Broucke, S., Fullam, J. *et al.* Health literacy and public health: A systematic review and integration of definitions and models. *BMC Public Health* **12**, 80 (2012). <https://doi.org/10.1186/1471-2458-12-80>