



# Proactive partnerships

## Tackling the challenge of inappropriate antibiotic prescriptions for upper respiratory tract infections

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**REPORT FROM THE GLOBAL RESPIRATORY INFECTION PARTNERSHIP**

Meeting held 5th February 2016, Taplow House, Windsor, UK

For more information on the Global Respiratory Infection Partnership and to access the materials referred to in this report please visit [www.GRIP-initiative.org](http://www.GRIP-initiative.org)



# THE GLOBAL RESPIRATORY INFECTION PARTNERSHIP DECLARATION

**“We, the Global Respiratory Infection Partnership (GRIP), recognising the imminent onset of the post-antibiotic era and taking full cognisance of the declining numbers of new antibiotics in development hereby commit to:**

1. Consistent, sustainable evidence-based advocacy and intervention for rational antibiotic use and antimicrobial stewardship (AMS);
2. Formulating a framework for non-antibiotic treatment options for respiratory tract infections (RTIs), such as sore throat, common colds, influenza and cough;
3. Facilitating multi-stakeholder commitment to antibiotic stewardship and rational antibiotic use.”



## GRIP MEETING ATTENDEES



**GRIP meeting attendees (left to right):** Dr Ashok Mahashur, Dr Aurelio Sessa, Dr Doug Burgoyne, Dr Laura Noonan, Prof. Attila Altiner, Mr John Bell, Dr Martin Duerden, Prof. Sabiha Essack, Prof. John Oxford, Prof. Antonio Carlos Pignatari, Dr Alike van der Velden, Prof. Roman Kozlov, Mrs Helen Gordon

### GRIP

**Prof. John Oxford**, Emeritus Professor of Virology at St Bartholomew's and the Royal London Hospital, Queen Mary's School of Medicine and Dentistry, UK (Meeting Chair)

**Prof. Attila Altiner**, Head of the Institute of General Practice, University Medicine Rostock, Germany

**Mr John Bell**, 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**, President of Veridicus Health, Salt Lake City, Utah, USA

**Dr Martin Duerden**, Clinical Adviser on Prescribing to the UK Royal College of General Practitioners and Clinical Senior Lecturer, Bangor University, Wales, UK

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

**Prof. Roman Kozlov**, Director of the Institute of Antimicrobial Chemotherapy, Smolensk State Medical University; Chief Specialist of the Ministry of Health of the Russian Federation on Clinical Microbiology and Antimicrobial Resistance; President of the Inter-regional Association for Clinical Microbiology and Antimicrobial Chemotherapy, Smolensk Russia

**Dr Ashok Mahashur**, President of the Indian Chest Society and Consultant Chest Physician, Mumbai, India

**Dr Laura Noonan**, GP, Mullingar and member of the Irish College of General Practitioners, Co Westmeath, Ireland

**Prof. Antonio Carlos Pignatari**, 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, Arcisate, Italy

**Dr Alike van der Velden**, Assistant Professor, University Medical Center Utrecht, Netherlands

### GUEST SPEAKER

**Mrs Helen Gordon**, Chief Executive, Royal Pharmaceutical Society

## EXECUTIVE SUMMARY

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- Antimicrobial resistance (AMR) continues to be a global threat, with awareness of the problem still insufficient within certain constituencies and sectors in some countries.
- Antibiotic prescribing rates for upper respiratory tract infection (URTI) are inappropriately high in most countries.
- While many guidelines and action plans have been disseminated, there is still a lack of clear implementation guidance and unawareness on the appropriate use of antibiotics in URTI management.
- Greater collaboration between organisations involved in tackling AMR, with clearer simplified messages, could help accelerate the translation of guidance into effective practice.
- There is a need for greater awareness and education among patients and healthcare practitioners (HCPs) on: symptom duration, why antibiotics are not appropriate for management of the majority of URTIs and the suitable alternatives to managing symptoms.
- Throughout 2016, GRIP will further its efforts in advancing the appropriate management of URTIs, through partnering with a range of national and international organisations.
- A framework to measure and evaluate both global and local initiatives will be put in place in order to tailor future GRIP activations.

## INTRODUCTION

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In February 2016, the GRIP partnership met to review the global efforts to combat AMR and determine the potential benefits of collaboration. The aim of the meeting was to examine GRIP's existing global and local partnerships, and define how to establish new partnerships to further extend the network. The group also explored additional measures to enhance the dialogue between patients and prescribers about the appropriate use of antibiotics in URTIs and sought to develop clearer ways in which to measure its success in 2016.

**“ Where have we come from? Who are we? Where are we going? ”**

**Professor Oxford**

Chair Professor Oxford opened the meeting by highlighting the achievements of GRIP and encouraging the group to look at how it could make further impact.

Providing an overview on the diminishing usefulness of antibiotics, Professor Oxford presented a paper recently published in Nature that in part looked at antibacterial drug discovery in the resistance era. The golden era for antibiotics was the 1950-1970s. Since the 2000s, however, we have been in the resistance era, with the use of broad-spectrum antibiotics offering a low success rate. The paper suggested a need to focus on narrow-spectrum antibiotics and the introduction of innovative methods to create these in future years.

With the dearth of new antibiotics in development as well as the protracted time to bring any new antibiotic into clinical practice, interventions to combat AMR and changing behaviours of patients, prescribers and pharmacists to preserve the antibiotics we have remain critical, emphasised Professor Oxford. In order to effect behaviour change regarding people's attitudes to antibiotic use in URTI management, a multi-pronged approach is needed.

## GRIP ACHIEVEMENTS

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GRIP has come a long way since its establishment in 2011. The first GRIP Meeting was held in 2012, where the group defined their mission and how they would operate in the broader context of AMR. GRIP also focused on driving the reduction of inappropriate antibiotic use for URTIs, as this was deemed a critical area where swift interventions and education could make a real difference in prescriber practice

and patient behaviour. During 2013 and 2014, knowledge was translated into practice – the pentagonal 5Ps framework (policy, patients, prescribers, prevention and pharmacy) was introduced. GRIP materials were developed and released to provide pharmacy personnel and prescribers with the tools to have effective conversations around appropriate management of URTI.

In 2015, GRIP further accelerated its efforts with a number of global and local activations, with the aim of increasing the visibility and use of the pentagonal 5Ps framework for antimicrobial stewardship, an interlinking, flexible framework comprising five key areas – Policy, Prevention, Prescriber, Pharmacy and Patient.

**PATIENT PATHWAY RESEARCH  
PRESENTED BY MR ADRIAN SHEPHARD**

In 2015, global patient pathway research, commissioned by RB, was carried out across 33 countries and investigated why patients visit HCPs for URTI, who they consult, the result of the visit (recommendation, prescription) and antibiotic use. The research showed that globally 47% contacted a doctor for their URTI.

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**The most common reasons for consulting any doctor for URTI are:**

*“I needed a prescription”*

**25%**

*“This person is the expert”*

**23%**

*“This person knows my medical history”*

**21%**

*“This is the person I trust the most”*

**21%**

These figures highlight the importance of trust in consultation and the critical stewardship and educational role HCPs are able to play.

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For those consulting any physician for URTI, 18% of patients receive an antibiotic.

GRIP members presented at a number of conferences to drive the localisation agreed upon in 2015. A number of interviews with GRIP members were filmed at these conferences; to watch the interview highlights please visit the GRIP website [www.GRIP-initiative.org](http://www.GRIP-initiative.org)

**AMERICAN COUGH CONFERENCE (ACC)**

The 5th ACC was held in Washington, DC in June. The conference focused on the past, present and future of cough research, its evaluation and management. Dr van der Velden gave an oral presentation highlighting the key role HCPs can play in reducing inappropriate antibiotic prescriptions for cough and URTIs through exploring patient expectations and educating patients on symptomatic treatment options. Dr van der Velden presented data showing 20% of patients expect a prescription for uncomplicated cough once they consult and HCP. Based on patient recollection research, one third of all cough incidences resulted in antibiotic use. Coordinated professional education is required for effective implementation of antibiotic stewardship. The GRIP 5Ps framework and associated resources could be one such support.

**WORLD CONGRESS AND EXHIBITION ON ANTIBIOTICS (WCEA)**

The WCEA conference was held in Las Vegas, USA in September of 2016. It focused on the opportunities and challenges associated with antibiotic resistance and antibiotic effectiveness as a renewable resource. Dr Duerden presented on the global challenge of AMR and the problem of prescribing antibiotics for URTIs in UK primary care and on evidence that many of these prescriptions were inappropriate. Dr Duerden showed data from a UK patient survey conducted by RB. It found 25% of those who consulted a GP for a URTI said they received an antibiotic. This highlights the need for patient and HCP education on appropriate management and the effectiveness of OTC options. GRIP’s 5Ps framework and 1,2,3 approach which enables primary care to take an evidence-based, non-antibiotic approach in the management of URTIs was then highlighted. Dr Duerden noted that the GRIP 1,2,3 approach could be used to improve consultations with patients.

Dr Burgoyne presented on the role that managed care and cost of antibiotics can play in facilitating inappropriate antibiotic prescriptions (covered in greater detail below). He also talked of the geographical comparisons in HCP consultations and antibiotic prescription rates. In the US, 28% of those who consulted with a physician for a URTI said they received an antibiotic.

**INTERNATIONAL PHARMACEUTICAL FEDERATION (FIP)**

At the 2015 FIP conference, held in Dusseldorf, Germany, Mr Bell gave a poster presentation on the role of community pharmacists in the management of antibiotics stewardship. Data show that there is a significant likelihood that URTI patients who present to a physician will obtain an antibiotic. Pharmacy teams are ideally placed to provide advice to patients and offer alternate effective, symptomatic relief. Behaviour change requires an integrated approach across all HCPs, highlighted in GRIP’s 5Ps framework. There is also a need for effective dialogue between HCPs and patients, which can be aided by the implementation of GRIP’s 1,2,3 approach: address patient concerns, assess severity and counsel on effective self-management.



## WORLD ORGANIZATION OF NATIONAL COLLEGES, ACADEMIES AND ACADEMIC ASSOCIATIONS OF GENERAL PRACTITIONERS/ FAMILY PHYSICIANS (WONCA)

The 2015 WONCA conference was held in Istanbul, Turkey. Mr Shephard, Senior Global Professional Relations Manager at RB, reported that 18% of patients consulting GPs were prescribed antibiotics for a URTI. Trust in the HCP/GP was reported as the key reason for consulting with URTIs, as well as the desire for a prescription. GPs have the opportunity to play a pivotal role in antimicrobial stewardship, through provision of information, advice and effective symptomatic treatment options.

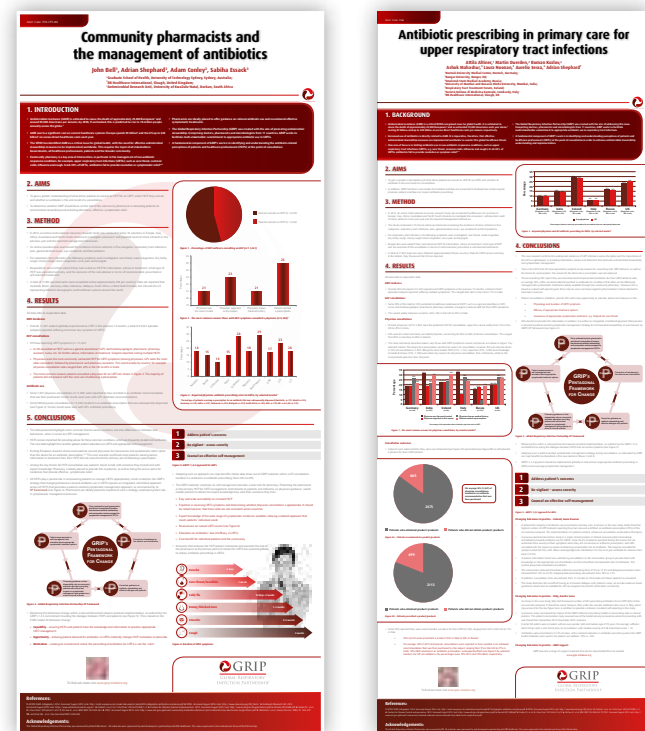
after this time frame. The survey also highlighted that patients make assumptions of their illness based on certain terminology; they may also regard fever or yellow or green mucus as a sign of bacterial infection, signalling a need for antibiotics.

However, most patients do not go to their HCP to ask for an antibiotic. Patients are mainly seeking reassurance that they do not have something more serious than a cold. Patients trust their HCPs and are open to the solution the HCP recommends, even if this is not a prescription for an antibiotic but an over-the-counter (OTC) treatment. Symptom resolution is imperative, and patients become impatient if these are not controlled rapidly which may trigger demand for antibiotics. HCPs face a challenge in counteracting these demands and are thus more likely to prescribe antibiotics.

The results of this small survey highlight that patients have a reasonable degree of knowledge about what causes URTI, however HCPs could improve this by spending more time on education, reassurance and advice. Providing patients with information on symptom duration and alternative treatment choices (symptomatic relief rather than antibiotics) for URTI management could reduce antibiotic-prescribing rates.

### BOB JUNIOR PRESENTED BY MR SHEPHARD

Following on from the positive response to the Bob patient video released last year, GRIP has developed another patient video to raise awareness of typical URTI symptom duration and the role pharmacists can play in the appropriate management of URTI. This video again follows the character of Bob with the focus on his family and in particular, his son Bob Junior. In the video Bob Junior is suffering from a sore throat and a cough. The video explains the role of the pharmacist in recommending effective symptomatic relief and appropriate treatment to parents, to prevent inappropriate antibiotic use in children. The video can be downloaded here: [www.GRIP-initiative.org/resources](http://www.GRIP-initiative.org/resources)



### PATIENT PERSPECTIVES ON THE USE OF ANTIBIOTICS TO TREAT COLDS PRESENTED BY MS JOHNELLE WHIPPLE, WITH SUPPORT FROM DR BURGOYNE

In 2015, RB conducted a consumer survey to understand perspectives, strategies and knowledge about the use of antibiotics to treat colds. Key questions were on participant knowledge base, treatment-seeking behaviour and assessment of the disconnect between patients and HCPs.

Results showed that patients understood the basics – the majority of respondees knew that viruses cause colds, that antibiotics do not treat viruses and that it's important to finish an antibiotic prescription. However, patients have unrealistic expectations on the duration that cold symptoms may last (four to five days), and assume that their illness is something more serious





**POLICY AS A DRIVER FOR ANTIBIOTIC PRESCRIBING IN THE US PRESENTED BY DR BURGOYNE**

Dr Burgoyne highlighted that antibiotic use for URTIs is high in the US. A study in individuals over five years of age showed acute RTI-associated antibiotic prescriptions between 2005-2006 were 146 per 1000 population. The most common category for which antibiotics were prescribed was respiratory conditions (41% of all visits in which antibiotics were prescribed between 2007-2009). There is large variation across the US and also within different health plans – some are much better than others in responsibly prescribing antibiotics for URTI.

It is important to note that the cost of resistance is much higher than the cost of prescribing antibiotics. In 188 patients with antibiotic-resistant infections in a single hospital, the lowest estimated attributable medical and societal cost was \$13.35 million.

The US payment system for drugs is unique. Managed care is used in the US to describe a variety of techniques deployed by managed care organisations to reduce cost, control utilisation and improve the quality of care. In the US, the cost of antibiotics is a driver of prescriptions and their low cost means there is little incentive to improve management. HCPs often receive a higher reimbursement for prescription only items, such as antibiotics, compared to recommending symptomatic relief. It is important that incentives that promote the stewardship of antibiotics are introduced. This can be done through the introduction of financial incentives for symptomatic treatment of RTIs, lobbying for policies that introduce financial incentives to encourage development of novel antibiotics, and driving development and implementation of stewardship programmes. These programmes should invest in tools that make use of electronic models to support health-plan monitoring of appropriate antibiotic prescriptions, development of clinical decision-making tools and encouraging health-plan involvement to support such tools.

There is also a need to remove the incentives for inappropriate use by introducing revenue models that are not dependant on the number of prescriptions filled. Dr van der Velden noted that in the Netherlands prescribers are fined if they use antibiotics inappropriately – for example, if they have over-prescribed an antibiotic or had to resort to 2nd- or 3rd-line antibiotics.

With a pay-per-consultation model, prescribers in the US have to take into account patient satisfaction to drive repeat consultations. Prescribers may be concerned that if they do not prescribe an antibiotic, their patients will be dissatisfied with the consultation. HCP and patient education on the appropriate management of URTIs and the effectiveness of symptomatic relief options can aid in tackling these concerns.

**Patients should be educated on symptom duration and appropriate management, therefore reducing pressure on HCPs to prescribe antibiotics.**



**ACTIVATIONS TARGETING HCPS IN BRAZIL PRESENTED BY PROFESSOR PIGNATARI**

In October 2015, the Spanish/Portuguese version of the GRIP website was launched in Brazil, while GRIP Brazil also presented at a number of conferences, including the Brazilian Society of Otolaryngology and Head and Neck Surgery national meeting and the Brazilian Society of Clinical Medicine meetings in São Paulo, Rio de Janeiro and Florianópolis.



At these conferences, 86-99% of people attending considered GRIP to be an excellent initiative. A number of editorials were released in various publications including in the Revista da Sociedade Brasileira de Clínica Médica, the Journal of the Brazilian

Society of Internal Medicine, which has a reach of 4,000 GPs. The GRIP launch was also publicised through an Anti-Antibiotic Day press release. Expert interviews were conducted with Professor Pignatari and Professor Mônica Menon – these interviews reached over 50 million viewers. In Brazil, targeting pharmacists to deliver the message of appropriate prescribing is vital, as it is not possible to dispense an antibiotic without prescription. Therefore, there is a need to guide patients in store on symptomatic relief alternatives. GRIP was introduced to pharmacists through 150 sales representatives who distributed educational materials to drive awareness of symptomatic relief alternatives and to announce the launch of the website. In 2016, GRIP Brazil will be focusing on pharmacy, prescribers and gaining publicity around the cause.



**PRESCRIBING RATES OF ANTIBIOTICS IN PRIMARY CARE IN IRELAND PRESENTED BY DR NOONAN**

In 2015, a report looking into primary care antibiotic prescription in Ireland was published. The results showed that there was seasonal fluctuation, with high prescribing of antibiotics during the winter season, while lower social economic communities are associated with higher antibiotic prescribing rates. The report highlighted that there is still a need for education: one in three Irish adults had taken an antibiotic in the previous year and a quarter of people believe that antibiotics prevent colds from developing into a more serious illness or help to speed up recovery. Some 37% of people also agreed with the statement: “by the time I am sick enough to contact or visit a doctor because of a cold I usually expect to get a prescription for antibiotics”.

In Ireland a number of factors affect antibiotic prescribing rates. There is a mixed insurance model, with some patients getting full government cover, while other patients have to pay. There is currently a move towards universal healthcare. The most recent change was to provide free GP care to all patients aged under six years – which has dramatically increased the number of

consultations in this age group. This demonstrates that parents are much more likely to take their children to see a doctor when it is free. It is not known yet how this will impact on antibiotic prescribing rates, particularly for URTIs.

To improve patient awareness around AMR, a campaign was developed. A website provided practical advice for patients on what they should do if they have a URTI:  
<http://www.undertheweather.ie>

Another issue being faced in Ireland is the use of specific antibiotics that are inappropriate for the condition treated. This is being addressed by clearer guidance on the appropriate antibiotic to treat various infections, with specific encouragement to use narrow spectrum antibiotics wherever possible. In 2016, Dr Noonan will continue to collaborate with organisations in Ireland, including the Irish College of General Practitioners, the Royal College of Physicians of Ireland and the Royal College of Surgeons in Ireland, along with public information campaigns to promote effective antimicrobial stewardship.



- More people visit an HCP to discuss their symptoms when it is made easier and cheaper to visit – in most cases this is because patients are looking for reassurance
- Providing patients with education on symptom duration and more appropriate treatment choices (symptomatic relief rather than antibiotics) for URTI management needs to be a priority going forward



### **UK ANTIBIOTIC AWARENESS WEEK ACTIVATIONS PRESENTED BY DR SAMANTHA BRADLEY**

In the UK, AMR is part of the national health agenda and has been supported by a number of initiatives to tackle the problem. GRIP UK identified the importance of delivering an integrated approach to the GP, pharmacy team and patient. It developed initiatives to provide patient education on symptom duration to avoid GP visits, supported by GP and pharmacy education about why antibiotics are inappropriate for the majority of URTIs, and the availability of symptomatic treatment options.

**“Telling people not to do something is much less effective than telling them to do something different**

**Dr Bradley**

Over the last four years a number of activations have been developed that have been led by the GRIP initiative and aims. In 2012, materials were developed that supported GPs in having effective patient consultations. In 2013, toolkits were mailed to GP surgeries and online training for pharmacy was launched via [rbforhealth.co.uk](http://rbforhealth.co.uk). In the following year support materials were extended to cover pharmacy. In 2015, a meeting was held on alternatives to antibiotics for URTI. The meeting aimed to raise awareness of current programmes and to share best practice, to discover how to collectively achieve change and how this change can be measured.

**In 2016, GRIP UK activities will focus on face-to-face training seminars. Some 50 free evening seminars will be hosted reaching over 3,000 pharmacy staff**



### **AMR AS THE TOP HEALTH PRIORITY IN THE NETHERLANDS PRESENTED BY DR VAN DER VELDEN**

In the Netherlands, the Dutch Minister of Health, Edith Schippers, has made fighting AMR the top priority of the Dutch EU presidency. Core aims related to this priority include: reducing inappropriate antibiotic prescribing by 50%, delaying spread of multi-resistant bacteria, increasing international collaboration and reducing the number of deaths due to bacterial resistant infections.

An expert group was established at the National Institute for Public Health and Environment and one of their aims includes continuous monitoring of the quality of antibiotic prescribing at the individual GP and/or practice level.

**An action plan has been developed with the aim of carrying out national surveillance of antibiotic prescribing, with the objective of targeting HCPs with a below average quality of prescribing with education to reduce inappropriate prescribing**



**THE ROLE OF THE ROYAL PHARMACEUTICAL SOCIETY (RPS) PRESENTED BY MRS GORDON**



The Royal Pharmaceutical Society is the dedicated professional body for pharmacists in England, Scotland and Wales and has over 40,000 members. The RPS's mission is to lead the profession of pharmacy to improve public health and wellbeing. Helen Gordon, Chief Executive of the RPS, attended the 2016 GRIP Meeting to provide GRIP with an overview of its role and position in the fight against AMR.

AMR is a priority for the RPS, with pharmacists expected to play a leading role in stewardship of antimicrobials. There has been a fundamental shift towards a more collaborative approach in the last five years and the RPS considers that working within partnerships is fundamental to progress.

In 2014, the RPS published *New Medicines, Better Medicines, Better use of Medicines*, a report that identified key actions needed in the fight against AMR including educating the public, encouraging further development of antimicrobials and advancing antimicrobial stewardship. It was one of the most downloaded reports from the RPS website. The report was used by the RPS in Scotland who hosted an AMR reception at the Scottish Parliament to prompt a parliamentary debate. This report illustrates how the RPS is playing a leading role in the future management of antibiotic resources.

The 2015 Antibiotic Guardian Week was an RPS-backed campaign, coordinated to align with the European and World Antibiotic Awareness Weeks. There are currently approximately 27,900 pledges, with an aim of reaching 100,000. The RPS has also been working with the Royal College of Physicians (RCP), Royal College of General Practitioners (RCGP) and Royal College of Nurses (RCN), and in 2014 released a joint statement on AMR, following a joint summit. An antimicrobial web portal has also been produced – [www.amsportal.org](http://www.amsportal.org) – a web resource for all HCPs that will link to existing worldwide AMS education and developmental resources.

The RPS has also been working with FIP, with the aim of identifying how best practice can be shared among members and what mechanisms can make a difference. As a result of advocacy by RPS and the Pharmaceutical Society of Australia, FIP is now leading further action on the role of pharmacists in addressing the issue of AMR.

**“ Working within successful partnerships with aligned goals will amplify the efforts that can be made by individual organisations**

**Mrs Gordon**



**THE PARTNERSHIP BETWEEN GRIP AND THE INDEPENDENT COMMUNITY PHARMACY ASSOCIATION (ICPA) PRESENTED BY PROFESSOR ESSACK**

Professor Essack provided the group with an overview of the partnership with the Independent Community Pharmacy Association in South Africa (ICPA), which covers 1,100 independent pharmacies, 800 wellness clinics and over 20,000 pharmacy employees.

One particularly interesting piece of work undertaken by the GRIP/ICPA partnership was a study that explored whether the GRIP materials, specifically the GRIP Pharmacy Flipbook, could serve as an educational intervention to enhance the knowledge, attitude and practice (KAP) of pharmacists on antibiotic resistance and the appropriateness of antibiotics for the treatment of URTIs. The study used a pre- and post-intervention questionnaire survey and found that there was an improvement in knowledge on the contributing factors for AMR, duration of symptoms and good antibiotic practice upon exposure to the tool. Pharmacists further found the tool simple and understandable. This study highlights the role education can play in pharmacy to advance antibiotic stewardship.

In 2016, the GRIP/ICPA is looking to extend this work for the Winter season (June/July) through posters, Bob and Bob Junior videos in pharmacy stores and the release of a pharmacy flip book and tear-off pads used by pharmacy teams.

- 1 Address patient's concerns**
- 2 Be vigilant - assess severity**
- 3 Counsel on effective self-management**







**THE ROLE OF NPS MEDICINEWISE IN DEVELOPING AN ALIGNED APPROACH PRESENTED BY MR BELL**

NPS MedicineWise is an independent, evidence-based, not-for-profit organisation in Australia that promotes quality use of medicines and medical tests. NPS MedicineWise is now in the final year of a five-year programme to reduce AMR and optimise infection management. There is a target to reduce antibiotic use by 25% in five years to be in line with the Organisation for Economic Co-operation and Development average.

NPS MedicineWise has been prolific in working collaboratively. One of their key partnerships is with the Pharmaceutical Society of Australia. Together they have produced materials, published articles, developed and distributed learning modules and produced conference publications. The University of the Sunshine Coast has used these materials and also those produced by GRIP in their research on delayed dispensing. The launch of GRIP in Australia was supported by the NPS, as well as by the Australian Medical Association, and the Royal Australian College of General Practitioners.

NPS collaborated with the Australian Medical Association and Royal College of General Practitioners for the launch of GRIP in Australia and the development of associated activities.

A particularly successful activation carried out by the NPS recently was a multi-platform media campaign in which 50,000 people pledged to fight the cause and 50 million Facebook page hits were achieved. NPS MedicineWise also partnered with Tropfest to launch an industry-first, short film competition to help fight antibiotic resistance this cold and flu season. One hundred short films were submitted. The entries to the festival can be found here: <http://winteriscoming.nps.org.au>

The emphasis of NPS activations in 2016 will revolve around further changes in awareness of AMR and behaviour change in GPs, nurses, other HCPs and patients. The NPS will be launching case studies for HCPs with a focus on otitis media, as well as updating and reviewing the GRIP symptomatic management pad. There will be a focus on improving effective communications to address patient expectations. The NPS is very well aligned with GRIP in terms of their approach to AMR, and it is hoped that emphasis will be placed on communicating symptom duration and symptomatic relief options in the immediate future.



**THE NEED FOR AN INTEGRATED APPROACH IN HOSPITAL AND PRIMARY CARE PRESENTED BY DR SESSA**

In Italy there is a high rate of antibiotic prescribing and therefore, unsurprisingly, high rates of resistance, including a resistance level of 42.2% for E.coli vs 22.5% in the rest of Europe. A recent publication looked at the relationship between primary and hospital care settings and the volume of antibiotic prescribing. It found that in the community setting, antibiotic prescriptions had decreased by 6.6%, whereas in the hospital setting there was a 3.8% increase in prescriptions. It was also found that there are different bacteria present in different settings and in different hospitals. Therefore, it is necessary to know what strains of resistant bacteria are present in each area/setting and use narrow spectrum antibiotics accordingly.

Measuring the change of prescriptions over time will enable a focus on the problem areas and appropriate responses. While antibiotic prescriptions are on the increase in hospitals, it is important that this is not seen as a “hospital problem”. What is needed is an integrated approach, such as GRIP’s 5Ps framework involving doctors, pharmacists, policy makers and the public to develop a regional, coherent, non-antibiotic approach in the management of URTIs.

**“ We can not see antibiotic resistance in Italy as just a hospital problem, we need an approach that is all encompassing**

**Dr Sessa**



**THE NEED FOR LONG-TERM COLLABORATION WITH PRESCRIBERS IN RUSSIA PRESENTED BY PROFESSOR KOZLOV**

In 2015, a pilot information campaign was launched in the Smolensk region entitled “Antibiotic is a reliable weapon if the goal is bacterial infection”. The aim of this campaign was to reduce antibiotic misuse in outpatients with URTI, with a focus on primary care physicians, pharmacy personnel, patients/parents of children with RTI and the general public. Face-to-face meetings with 265 physicians at 14 outpatient departments and 5 regional hospitals took place. Printed materials for physicians and patients were distributed and video lectures by experts for self-education of physicians were recorded. A survey was also conducted to evaluate OTC sales of antibiotics. A video and social network group was developed for students to educate them on appropriate management of URTI.

In Smolensk, pharmacists are independent from local authorities and have a financial interest in OTC sales of antibiotics. Long-term collaboration with primary care physicians is preferable and highly appreciated by target groups. It is also important to note that the support of local authority representatives is essential.

[www.grip-initiative.org/resources/all-resources](http://www.grip-initiative.org/resources/all-resources)



## ROLE OF NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE (NICE) IN AMR PRESENTED BY DR DUERDEN

In England, antibiotic consumption has risen by 6.5% over the past four years, and this rise is associated with increased rates of AMR. Public Health England has identified that there are a number of professionals and professional bodies (GPs, nurses, local authorities, pharmacists, medical Royal Colleges & Health Education England, hospital prescribers, Directors of Infection Prevention and Control) that all have a part to play in tackling AMR and progress will require their full commitment and engagement. It has been highlighted that levels of resistance vary across the country, and there is a correlation between deprivation and higher levels of resistance.

**“ This is everyone’s problem and we all need to work together**

**Dr Duerden**

In 2015, NICE published the *Antimicrobial stewardship: system and process for effective antimicrobial medicine use* guidelines. Recommended interventions include a review of prescribing by antimicrobial stewardship teams, and using antimicrobials that are recommended in local or national guidelines. IT support systems would be beneficial to support the prescriber in making a decision on whether to prescribe antibiotics. Evaluation of effectiveness of interventions is also important via review of rates and trends of antibiotic prescribing and resistance.

To encourage appropriate antibiotic prescribing, NICE guidelines recommend that healthcare and social care practitioners work together across care settings to share consistent messages, learnings and experiences, and promote more suitable expectations to the public of when antimicrobials should be prescribed. This is congruent with GRIP’s view that increased collaboration is required between all HCPs for effective antimicrobial stewardship.

**In order to reduce national prescribing rates it is important that Clinical Commissioning Groups and HCPs follow local guidelines to undertake appropriate clinical assessment and then document the symptoms and signs used to diagnose patients**

While there is much guidance available on tackling AMR, the plethora of guidelines poses a challenge. Guidelines are easy to disseminate, but harder to implement. Local networks should be developed to ensure alignment and follow a consistent approach.

**“ It is easy to disseminate guidelines but much harder to implement them**

**Dr Duerden**

## GLOBAL WHO ACTIVATIONS PRESENTED BY PROFESSOR KOZLOV

The WHO has been challenged to adopt a greater role in the fight against AMR. In 2014, the WHO released the *Antimicrobial Resistance Global Report on Surveillance*. The report highlighted the high resistance rates observed in all WHO regions and the knowledge gaps among the public and professionals. The report also noted that many countries do not or are not able to implement guidance from action plans to tackle AMR. In 2015, the WHO launched their *Global Action Plan on Antimicrobial Resistance*, covering five strategic objectives: improving awareness and understanding, strengthening knowledge and evidence base, reducing incidence of infection, optimising use of antimicrobial medicines and developing an economic case for sustainable development. The action plan underscores the need for all-out effort and an effective “one health approach”.



In the same year, *Worldwide country situation analysis: response to antimicrobial resistance* was released. This report illustrated the low public awareness and lack of infection control programmes and treatment guidelines in many countries. It also highlighted the lack of actions plans in place, with only 33 out of 133 countries having a comprehensive action plan. An aligned approach is needed that is based on collaboration and networking of countries and organisations.

The WHO have recognised the importance of an aligned approach and have been working collaboratively. Professor Kozlov has been instrumental in developing a strong partnership with the WHO and has been key in the establishment of a new WHO collaborating centre in Smolensk.

GRIP is aligned with key WHO strategic objectives regarding human use of antibiotics as outlined in their global action plan, and GRIP was active in the consultation phase of its development. Since the WHO are reasonably open to input from other organisations there is a clear opportunity for further collaboration, according to Professor Kozlov. Opportunities for partnership include the production of materials such as infographics, websites, videos, press releases, presentations and activities such as country events and live twitter streaming at events.



**ACTIVATIONS LAUNCHED BY THE CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC) PRESENTED BY DR BURGOYNE**

The CDC, the leading national public health institute in the US, has previously been fiscally-constrained in combating AMR. In 2016, the budget has been increased to \$264 million, however this is still low versus spending on other national health issues. The CDC has introduced an initiative that focuses on stopping the spread of resistance, tracking antibiotic resistance, measuring impact and improving prescribing.

The CDC previously launched the Get Smart campaign – a national programme to tackle AMR, targeting patients and HCPs to improve antibiotic prescribing. The campaign involved the production of materials (posters, brochures, fact sheets), development of guidelines, a national media campaign and support of local programmes. A ‘Get Smart’

week was also launched, which coincided with European Antibiotic Awareness Day, Australia’s Antibiotic Awareness Week and Canada’s Antibiotic Awareness Week.

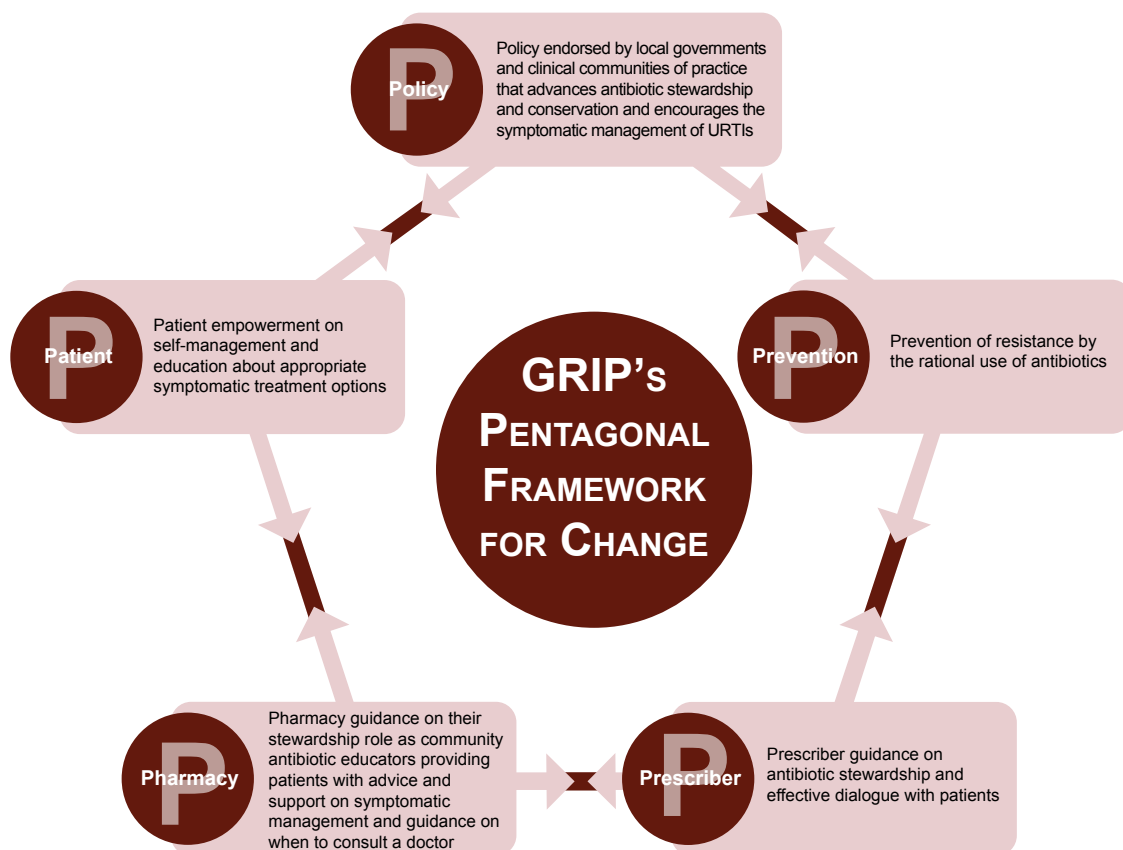
Other national programmes currently being employed include President Obama’s Executive Order, the White House’s National Strategy to Combat Antibiotic-Resistant Bacteria, Active Bacterial Core Surveillance, Gonococcal Isolate Surveillance Project, National Tuberculosis Surveillance System, Healthcare-Associated Infections-Community Interface and the National Strategy for Combating Antibiotic-Resistant Bacteria. The high volume of initiatives trying to address AMR often makes it difficult for HCPs and patients to determine what action to take next.

The CDC has a number of partnerships, including its partnership with the Hospital Corporation of America, which aims to better track antibiotic prescriptions. The CDC has also worked with Walmart to create educational videos for checkout lines across the country.

**THE 5Ps FRAMEWORK FOR THE NON-ANTIBIOTIC MANAGEMENT OF URTIS PROGRESS AND CHALLENGES**

The pentagonal 5Ps framework was developed by GRIP as an interlinking, flexible framework to highlight key areas of focus for antibiotic stewardship. The guiding principles include identifying patient attitudes to URTIs, educating HCPs on the appropriate management of URTIs and limiting

antibiotic use to high-risk patients with bacterial infections, and establishing local policy for symptomatic relief of URTI. Local activations of global initiatives was the focus of 2015; targeting pharmacy, prescribers and patients.



The GRIP's pentagonal framework for change encompasses five key areas –Policy, Prevention, Prescriber, Pharmacy and Patient.

## PHARMACY

The role of pharmacy is critical in promoting antibiotic stewardship. This is especially true for URTIs for which many effective symptomatic treatments exist. Pharmacists are strategically placed to educate patients and are therefore able to facilitate behaviour change and manage patient expectations in terms of demand for antibiotics. Pharmacists can help prevent AMR by impacting on prescriber practice and policy implementation. For these reasons, pharmacy should play a leadership and networking role among other organisations, in advancing a consolidated approach to AMR by antibiotic stewardship, specifically in URTIs.

### Challenges and opportunities:

- In some countries, the role of pharmacy in antibiotic stewardship is embedded into national policy work, however even more needs to be done to highlight the value of the role of pharmacy to policy-makers
- There is a need to continue to empower pharmacists to have effective consultations with patients, in order to recommend more appropriate symptomatic relief treatments

## PRESCRIBER

Prescribers are vital in reducing the rates of antibiotic use for the management of URTIs. Prescribers can highlight the importance of self-management of symptoms and communicate realistic expectations of symptom duration. It is important that prescribers are able to recognise what patients actually want in the consultation rather than assuming the patient wants an antibiotic. Furthermore, they should explain why antibiotics are often not needed and recommend the most appropriate treatment.

### Challenges and opportunities:

- Prescribers have an important role to play in highlighting when antibiotics are appropriate and when not
- An integrated approach to appropriate prescribing is needed
- Increased dialogue and understanding between pharmacy and prescribers will empower pharmacy to make recommendations; this enhances proper referral to each other

## PATIENT

Patients are consciously and unconsciously able to pressure prescribers for an antibiotic prescription and are therefore a necessary focus for appropriate management of URTIs. Patients are often misunderstood by HCPs, who think they are seeking an antibiotic prescription, whereas they are often simply seeking reassurance and advice on how to manage their symptoms. It is important to educate patients on typical duration of symptoms, why antibiotics are not effective to treat the majority of URTIs, and highlight that there are side effects associated with antibiotic use.

### Challenges and opportunities:

- Many patients still believe that antibiotics can prevent colds from developing into a more serious illness or help speed up recovery
- Patients seem to underestimate the typical symptom duration and when their symptoms last longer than expected they assume that they have something more serious than a URTI
- Often when patients deem they are ill enough to visit an HCP, they expect to be prescribed antibiotics

## POLICY

Policy varies both locally and globally, and while approaches need to be tailored per region there is also a need for consistency. Guidance needs to be put in place that advocates antibiotic stewardship. However, there is also a need for other measures that ensure the global alignment of policy, including: guidelines that discourage inappropriate use, HCP education and financial incentives to avoid the use of antibiotics for URTI.

### Challenges and opportunities:

- While there is much guidance available on tackling AMR, this adds to the confusion – meaning that implementation of national or global guidance can be challenging
- There is a need for collaboration across healthcare settings to share consistent messages, learnings and experiences and develop local networks to ensure alignment
- Incentives that promote the stewardship of antibiotics should be introduced
- The effectiveness of selling OTC antibiotics for URTIs needs to be assessed in order for policy to be developed that aids antimicrobial stewardship
- Evaluation of effectiveness of regional interventions is important via review of rates and trends of antibiotic prescribing and resistance
- Efforts also need to be placed on patient and HCP education to support implementation of policy



## CONCLUSION

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GRIP has reaffirmed its commitment to tackling AMR through implementation of global and local initiatives. While there are varying challenges faced across different countries and regions, a consistent approach is needed to overcome these challenges. GRIP will be developing a framework to measure and evaluate both global and local initiatives in order to tailor future activations.

Working within successful partnerships with aligned goals will amplify the efforts that can be made by individual organisations. Throughout the forthcoming year, GRIP will be working on strengthening existing partnerships and developing new collaborations to intensify its impact.

The high volume of initiatives trying to address AMR often makes it difficult for HCPs and patients to determine what action to take next. Efforts therefore need to be placed on providing consistent and aligned patient and HCP education; this can be aided in the future through the use of GRIP materials such as posters, fact sheets, websites and social media events. A patient-centred approach within consultations includes identifying concerns and expectations and providing education on the appropriate use of antibiotics and the natural duration of symptoms. It also includes discussing suitable symptomatic relief options and when patients should see their doctor. Therefore GRIP will be focusing on activations that highlight symptom duration and options for symptomatic relief.