

Antibiotic prescribing in primary care for upper respiratory tract infections

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BACKGROUND & AIM

Background

- Antimicrobial resistance (AMR) is a critical WHO-recognised issue for global health. It is estimated to cause the death of approximately 25,000 Europeans[1] and an estimated 99,000 Americans each year alone,[2] costing €9 billion[3] and up to \$20 billion[4] in excess direct healthcare costs per annum, respectively.
- Increased use of antibiotics is directly related to AMR. It is imperative, therefore, that effective antimicrobial stewardship measures are implemented worldwide to counter this global healthcare threat.
- One area of focus is in limiting antibiotic use in non-antibiotic responsive conditions, such as upper respiratory tract infections (URTIs, e.g. sore throat, common colds, influenza and cough). In 60–90% of URTIs, antibiotics fail to provide resolution or symptom relief.[5-7]
- The Global Respiratory Infection Partnership (GRIP) was created with the aim of addressing this issue. Comprising doctors, pharmacists and microbiologists from 11 countries, GRIP works to facilitate multi-stakeholder commitment to appropriate antibiotic use in respiratory tract infections.
- A fundamental component of GRIP's work is in identifying and understanding perceptions of patients and healthcare professionals (HCPs) at the point of consultation in order to enhance antimicrobial stewardship understanding and implementation.

Aim

- To gain a greater understanding of what drives patients to consult an HCP for an URTI, and whether an antibiotic is the end result of a consultation.
- In addition, GRIP members' case studies from Ireland and Italy are presented to illustrate how enhancing the physician-patient interface can impact antibiotic prescribing.

METHODS

- In 2014, an online multi-national consumer research study was conducted by RB across 33 countries in Europe, Asia, Africa, Australasia and North/South America to investigate the consumers' self-reported recall of minor ailments in the past year and the reported management behaviours.
- The study comprised a 15-minute online questionnaire examining the incidence of minor ailments in five categories: respiratory tract infections, pain, gastrointestinal issues, eye complaints and foot problems.
- For respiratory tract infections, the following symptoms were investigated: sore throat, nasal congestion, dry/tickly cough, chesty cough/chest congestion, sinus pain and laryngitis.
- Responders were asked if they had visited an HCP for information, advice or treatment, what type of HCP and the outcome of the consultation in terms of recommended, prescribed or self-selected treatments.
- A total of 17,302 responses were obtained (approximately 530 per country). Data for URTIs across Germany, India, Ireland, Italy, Russia and the UK are reported.

RESULTS

All data refer to respondent data.

URTI incidence

- Overall, 65% of subjects (11,261) experienced URTI symptoms in the previous 12 months, a total of 24,561 episodes (subjects reported suffering multiple symptoms). This ranged from 56% in the UK to 71% India.

HCP consultations

- Some 35% of the total (6,135) contacted a healthcare professional (HCP), such as a general practitioner (GP), nurse, otorhinolaryngologist, pharmacist, pharmacy assistant, emergency medical staff, for their URTI symptoms.
- This varied widely between countries, from 16% in the UK to 49% in India.

Physician consultations

- Overall, physicians (31%; 5,303) were the preferred HCP for consultation; again this varied widely from 12% in the UK to 45% in India.
- GPs were the most commonly consulted physician, accounting for 93% (4,949) of doctor consultations. This ranged from 85% in Germany to 98% in Ireland.
- The most commonly reported reasons why those with URTI symptoms consult a physician are shown in Figure 1 by selected market. The desire for a prescription was the top reason for consultation, however this was only the driver in 25% of consultations (1,349). Being the most trusted HCP (21%; 1,112), expertise (23%; 1,230) and knowledge of medical history (21%; 1,108) were other key reasons for physician consultation that, collectively, relate to the trust patients placed in their physician.

Consultation outcomes

- Subjects were asked whether they were recommended (see Figure 2A) prescribed (see Figure 2B) or self-selected a product for their URTI ailment.
- Some 59% reported they were recommended a product for their URTI (3,140), ranging from 44% in the UK to 71% in Italy;
 - o 49% (2,612) were prescribed a product (33% in Italy to 55% in Russia).
 - o On average, 20% (1,047) of physician consultations were reported to have resulted in an antibiotic recommendation that was then purchased by the subject, ranging from 9% in the UK to 27% in India; 18% (969) resulted in an antibiotic prescription, subsequently filled (see Figure 3 by selected market). For GP consultations, the percentages were 18% (941) and 18% (864), respectively.

Figure 1: The most common reasons for physician consultation, by selected market*

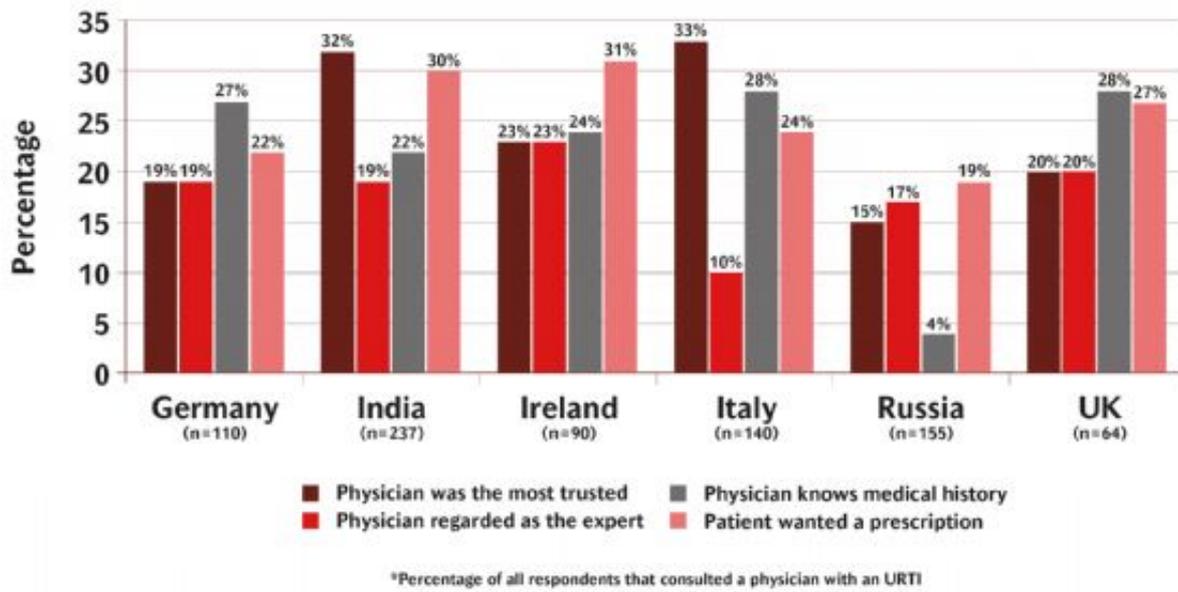


Figure 2A: Patients recommended a product/products

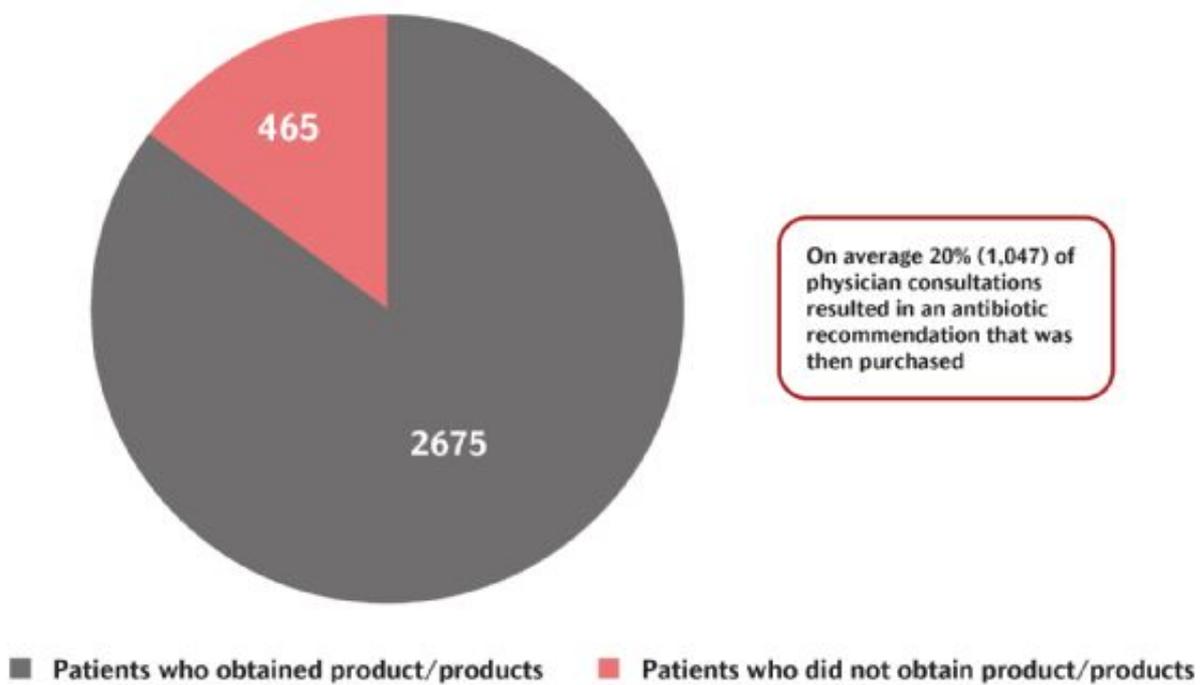


Figure 2B: Patients prescribed a product/products

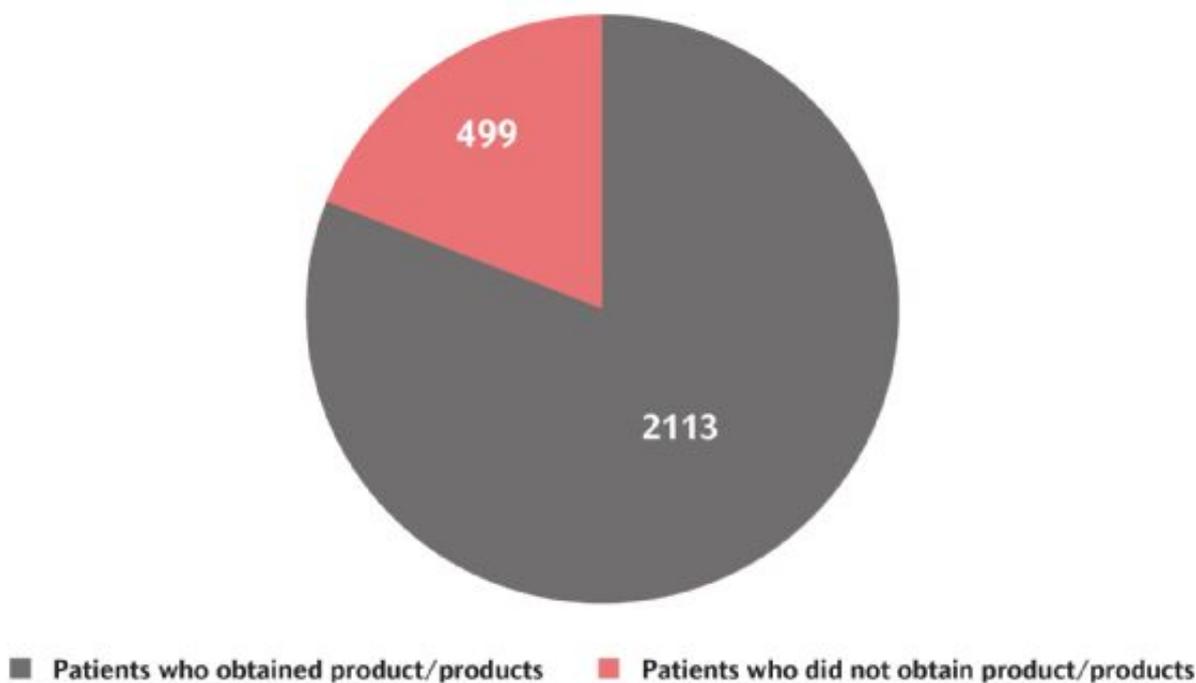
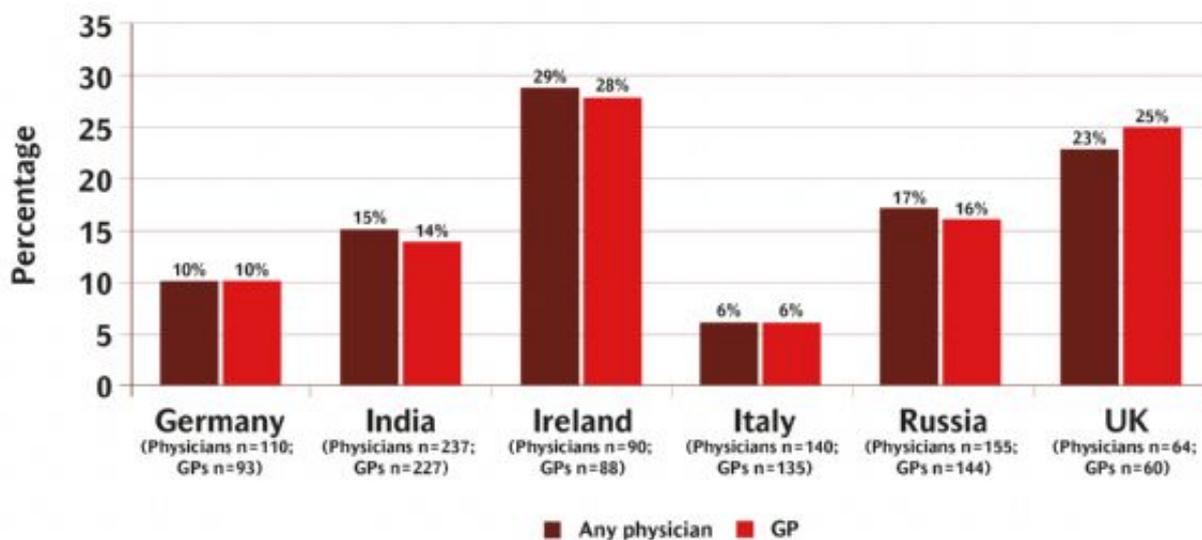


Figure 3: Reported physician and GP antibiotic prescribing for URTIs, by selected market*



*Percentage of patients receiving a prescription for an antibiotic that was subsequently dispensed

CONCLUSIONS

- This new research confirms the widespread incidence of URT infections across the globe and the importance of the GP as a gatekeeper in providing information, advice and treatment that promotes antimicrobial stewardship and symptomatic management.
- Trust in the HCP and GP were reported by subjects as key reasons for consulting with URTI ailments, as well as the desire for a prescription; the reason for the desire for a prescription was not explored.
- Those consulting GPs report they are recommended and prescribed antibiotics for their URTI ailments with, on average 18%, either recommended/prescribed an antibiotic for conditions that often can be effectively managed with symptomatic

treatments widely available through the community pharmacy. However, this is based on patient self-reporting and there may be some confusion regarding the treatment advice claimed to have been received.

- Patient consultations, therefore, provide GPs with a key opportunity to educate, advise and reassure on the:
 - o Physiology and duration of URTI symptoms
 - o Efficacy of appropriate treatment options
 - o Awareness of appropriate symptomatic treatment, e.g. Strepils for sore throat.
- GPs should not provide this information in isolation, but within an integrated, interlinked approach that provides a consistent patient-centred symptomatic management strategy for antimicrobial stewardship, as summarised by GRIP's 5P framework (see Figure 4).
- Delivering this within a real-world context requires practical implementation, as outlined by the GRIP's 1,2,3 commitment to aiding the dialogue between HCPs and consumers/patients (see Figure 5).
- Adopting such a patient-centred symptomatic management strategy during consultations, as advocated by GRIP, can reap benefits (as illustrated in the case studies in Boxes 1 and 2).
- GRIP's 1,2,3 approach should be implemented globally to help reduce inappropriate antibiotic prescribing in URTIs and encourage symptomatic management.

Contact details:

Global Respiratory Infection Partnership. <http://www.grip-initiative.org>

Acknowledgements:

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Figure 4: Global Respiratory Infection Partnership 5P Framework

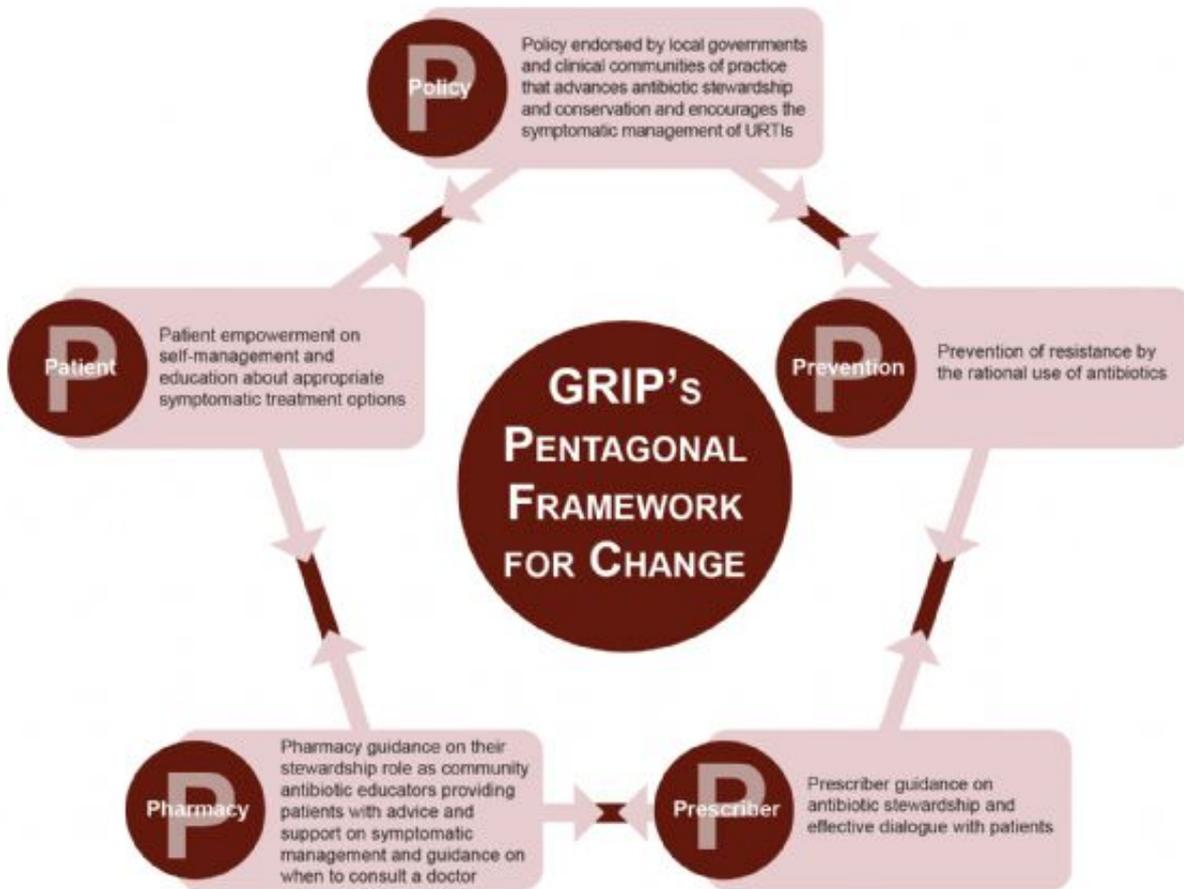


Figure 5: GRIP's 1,2,3 approach for HCPs

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

Box 1: Changing behaviour in practice - Ireland, Laura Noonan

- In Ireland the majority of antibiotics are prescribed in primary care. As shown in this new study, Ireland had the highest number of URTI patients reporting they had received and filled an antibiotic prescription (29%) of the six countries analysed. Yet, implementation of a patient-centred, enhanced consultation could reduce this figure.
- A previous patient-intervention study in a single clinical practice in Ireland assessed patient knowledge and attitudes towards antibiotic use for URTIs. Some 26.6% of patients reported feeling the doctor did not understand the severity of their symptoms when they did not receive an antibiotic prescription, with 30% consulted with the express purpose of obtaining a prescription for an antibiotic. The majority consulted for symptom relief (43.3%), with others seeking diagnostic clarification (13.3%) or to get certificate for absence from work (13.3%).
- A patient information sheet was used during consultations in the intervention group to provide them with knowledge on the appropriate use of antibiotics and the side effects and potential risks of antibiotics. The control group had a standard consultation.
- The intervention reduced immediate antibiotic prescribing from 47.5% to 13.3% and delayed prescription rates increased from 15% to 43.3%. Inappropriate prescribing was reduced from 10% to 3.7%.
- In addition, consultation time was reduced from 11 minutes to 10 minutes and fewer patients re-consulted.
- The study illustrates the benefit of having an enhanced dialogue with patients. Local, up-to-date evidence based guidelines should also be available for GPs to recognise the benefit within their community.

Box 2: Changing behaviour in practice - Italy, Aurelio Sessa

- As shown in this new study, Italy had the lowest number of GPs prescribing antibiotics for an URTI (6%) of the six countries analysed. It should be noted, however, that under-the-counter antibiotic sales occur in Italy, which may account for the low figure here, in addition to possible confusion in patient self-reporting in the study.
- A previous study considered the impact of the GRIP antibiotic prescribing toolkit on prescribing rates in clinical practice. This patient-intervention study assessed use of the toolkit among consecutive patients presenting with sore throat from September 2013-November 2013, inclusive.
- In total 165 adults were included, with an even gender split and median age of 39 years. On average, sufferers had 2.9 days with a sore throat prior to consultation, with median severity of 2.96 (maximum score = 5).
- Antibiotics were prescribed in 41.2% of cases, with a marked reduction in antibiotic prescribing where the GRIP toolkit materials were used in the patient consultation: 29% vs. 44%.

Box 3: Changing behaviour in practice - GRIP support

GRIP provides a range of support materials that can be downloaded from its website:
www.grip-initiative.org