

CPS-055

SORE THROAT AND ANTIBIOTIC RESISTANCE (STAR) STUDY: PRELIMINARY GLOBAL FINDINGS AND OPPORTUNITIES FOR PHARMACISTS

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INTRODUCTION

- Overuse and misuse of antibiotics are accelerating the progress of antimicrobial resistance (AMR), which is a serious global health issue and a major cause of mortality globally^{1,2}
- Real/perceived patient expectation for antibiotics from healthcare professionals (HCPs) influences inappropriate antibiotic prescribing and reinforces patients' often incorrect belief in the need for antibiotics³⁻⁵
- Awareness and education to reduce inappropriate use of antibiotics are central to the World Health Organization Global Action Plan and essential to help mitigate AMR, particularly in primary care, where the majority of antibiotic prescribing occurs in most countries^{1,5-10}
- Behaviour change that facilitates appropriate antibiotic use requires an understanding of prevailing behaviours and attitudes towards antibiotics to guide AMR awareness and antimicrobial stewardship interventions

AIM

- To generate a snapshot of behaviours and attitudes on antibiotic use in relation to respiratory symptoms across 12 countries to inform interventions that could drive lasting behaviour change towards appropriate use

METHODS

Study design

- An observational, cross-sectional, questionnaire-based study was carried out across 12 countries (Brazil, Germany, Italy, Mexico, Poland, Romania, Saudi Arabia, South Africa, Spain, the Philippines, Thailand, the United Kingdom [UK])
- Structured online interviews (15-20 minutes) were conducted throughout May 2022, where information was collected on socio-demographic variables, antibiotic use, attitudes towards antibiotics, seeking advice and counselling on respiratory symptoms and AMR

Study population

- Inclusion criteria:**
 - Adults aged 18-64 years
 - Had experienced and treated respiratory symptoms in the past 6 months
- Exclusion criteria:**
 - Had not experienced and treated respiratory symptoms in the past 6 months
 - Symptoms were part of a long-term illness
 - The underlying respiratory condition for their symptoms was either unknown to the respondent or they 'would rather not say'

Data analysis

- Data were analysed using Microsoft Excel and presented in descriptive form as percentages

RESULTS

Study population

- One thousand people who had experienced and treated respiratory symptoms in some way in the last 6 months were recruited from each country, resulting in a sample size of 12,000. Of this number, 50.5% were female

Advice on respiratory symptoms

- Overall, 86% (n=10,315; range: 73-93%) of participants sought some form of advice on how to treat their respiratory symptoms on the last occasion they were unwell (Figure 1)

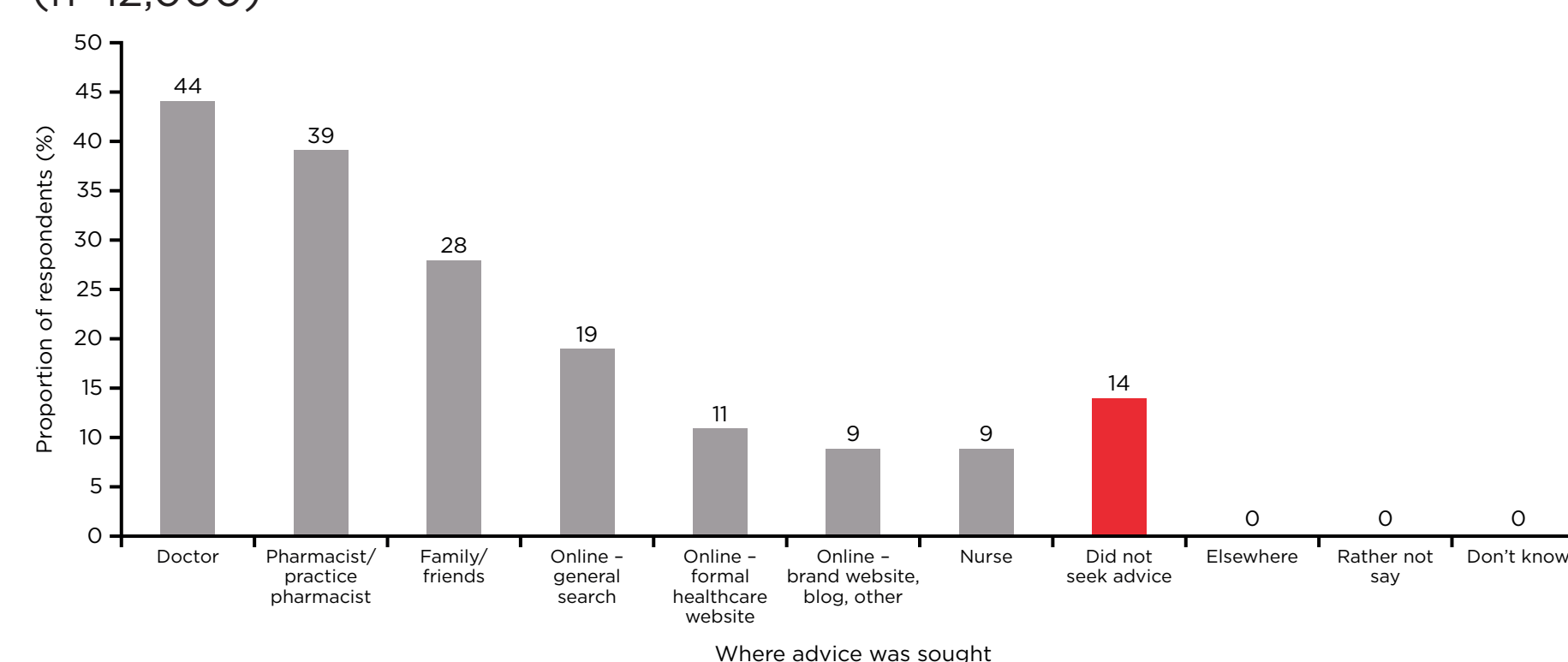
Figure 1. Participants who sought some form of advice on their respiratory symptoms across the 12 countries

Global: 86%

Country	Sought advice
Brazil	79%
Germany	83%
Italy	88%
Mexico	91%
Poland	83%
Romania	87%
Saudi Arabia	92%
South Africa	91%
Spain	79%
The Philippines	92%
Thailand	93%
United Kingdom	73%

- Of the respondents:
 - 44% (n=5257; range 27-61%) sought advice from a doctor
 - 39% (n=4655; range: 30-52%) sought advice from a pharmacist
 - 19% (n=2294; range: 9-35%) searched for advice online via a general search engine, usually Google (Figure 2 and Table 1)

Figure 2. Where advice was sought on the most recent occasion (n=12,000)



- Of those that sought advice:
 - 52% (n=5375; range: 41-61%) were advised to get a product from the pharmacy
 - 31% (n=3193; range: 19-47%) were prescribed an antibiotic
 - 34% (n=3442; range: 19-45%) were prescribed non-antibiotic treatment (e.g. analgesics, phytotherapeutics)
 - 12% (n=1250; range: 6-20%) were prescribed a treatment but did not know what

Table 1. Top three responses in each of the 12 countries (n=1000 per country)

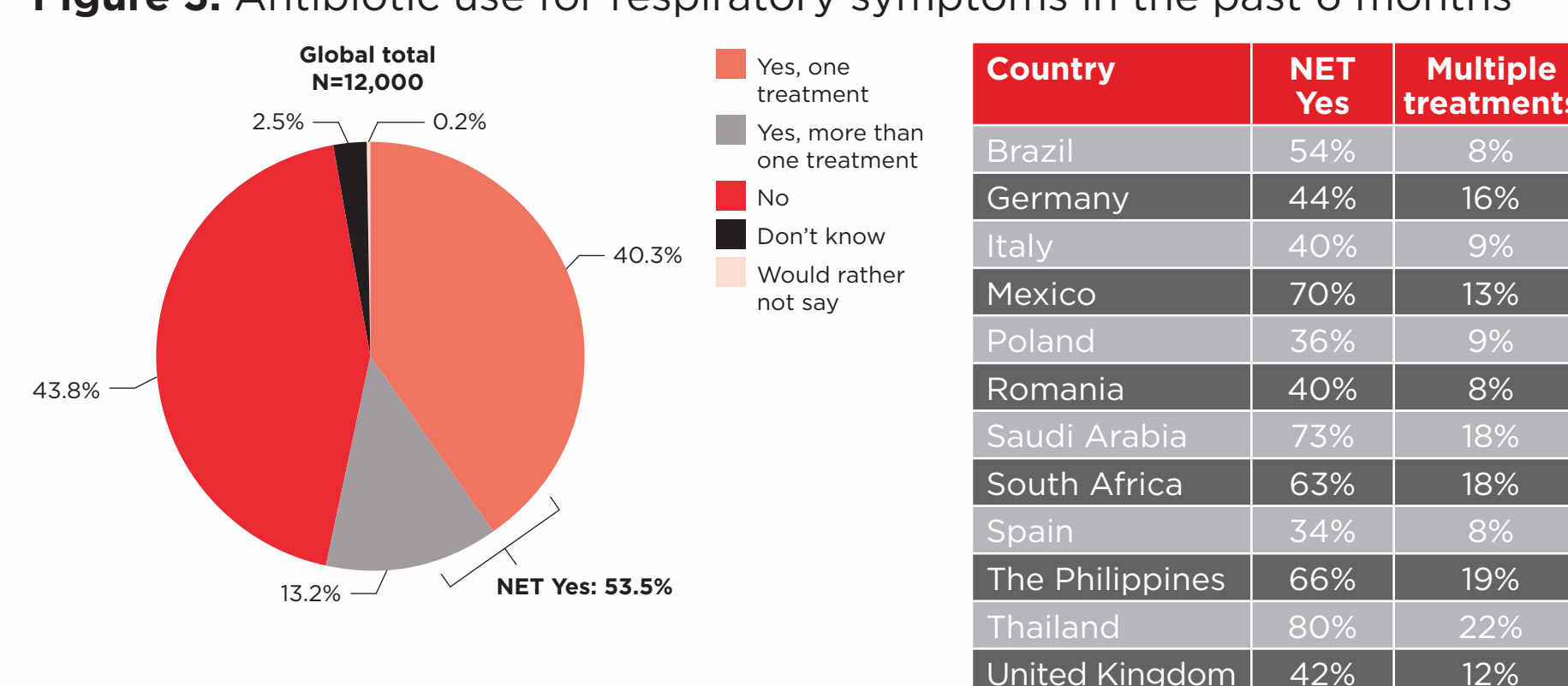
Country	Where advice was sought		
	Doctor	Pharmacist	Family/friends
Global	44%	39%	29%
Brazil	41%	32%	21%
Germany	46%	39%	22%
Italy	59%	45%	16%
Mexico	61%	31%	30%
Poland	45%	37%	24%
Romania	44%	46%	24%
Saudi Arabia	50%	40%	29%
South Africa	35%	52%	35%
Spain	36%	34%	17%
The Philippines	36%	33%	61%
Thailand	46%	47%	40%
United Kingdom	27%	30%	23%

■ ≥5% above global total ■ ≥5% below global total

Antibiotic usage

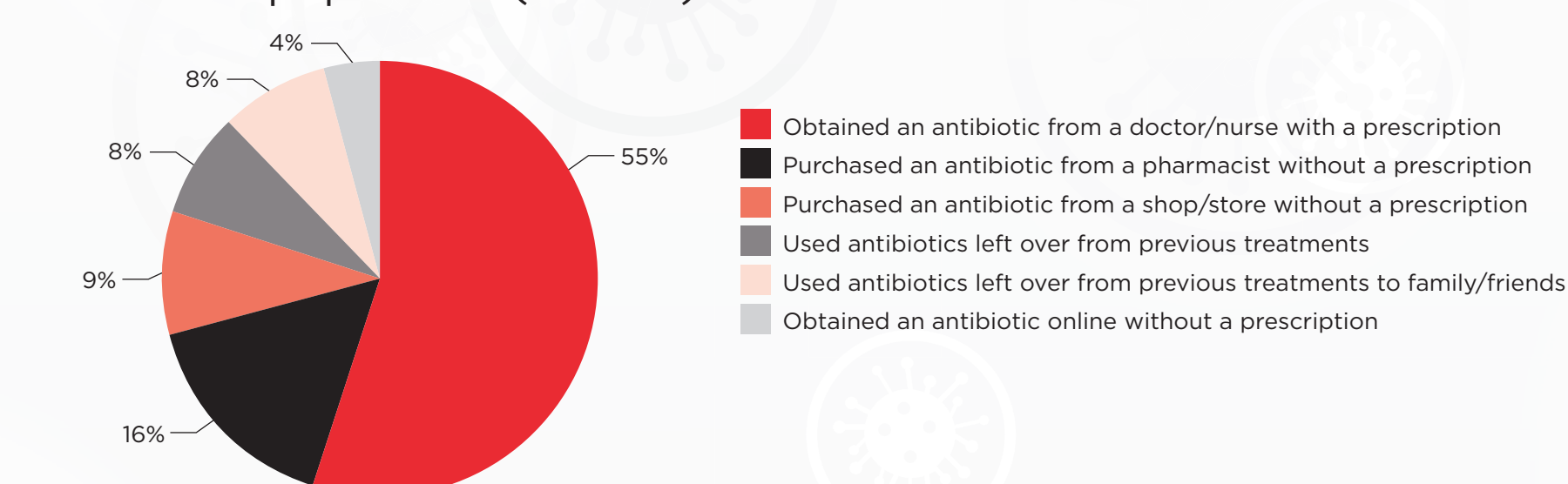
- In total, 54% (n=6415; range: 34-80%) of participants had taken antibiotics at least once for a respiratory symptom in the last 6 months (Figure 3)
- The top three conditions for taking antibiotics were throat infection (37%; range: 23-66%), colds (35%; range: 21-56%) and flu (34%; range: 19-63%)

Figure 3. Antibiotic use for respiratory symptoms in the past 6 months



- Among participants who used antibiotics:
 - 55% (n=3516; range: 46-67%) obtained the antibiotic from a doctor/nurse via a prescription
 - 16% (n=1011; range: 11-27%) stated that their last course of antibiotics was provided by a pharmacist without seeing a doctor first. It is important to note that in some countries pharmacists are authorised to prescribe antibiotics or can become pharmacist prescribers
 - 8% used leftover antibiotics from previous treatments (n=508; range: 6-11%) and 8% from previous treatments to family/friends (n=491; range: 5-10%) (Figure 4 and 5)

Figure 4. Method of obtaining antibiotics on the most recent occasion in the overall population (n=6415)



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DISCLOSURES

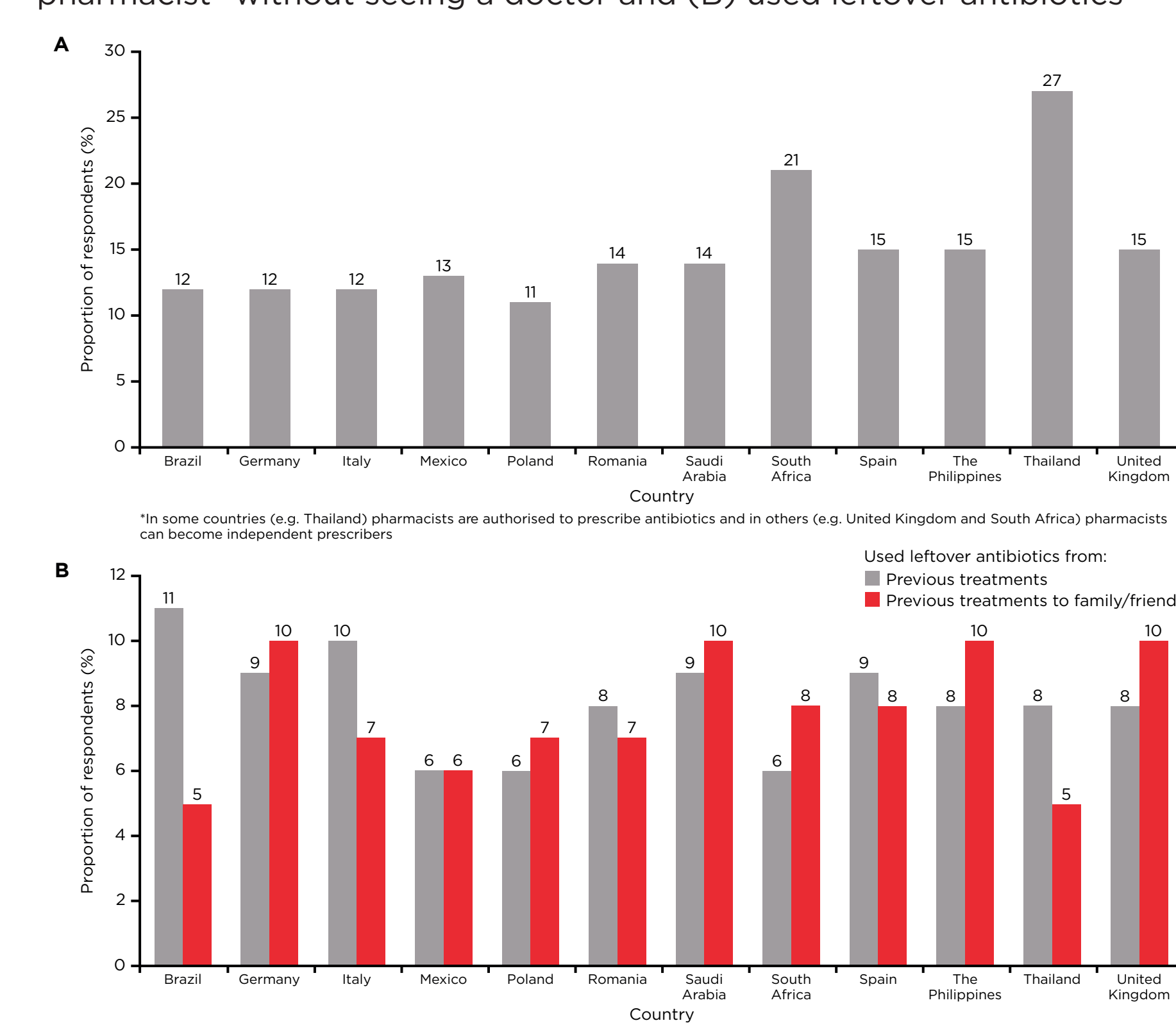
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Figure 5. Proportion of respondents who (A) purchased antibiotics from a pharmacist* without seeing a doctor and (B) used leftover antibiotics



AMR and antibiotic education

- Amongst those who used antibiotics obtained through an HCP:
 - 27% (n=1215; range: 15-55%) stated that AMR was discussed; 57% (n=2578; range: 40-73%) were advised on how to use the antibiotic and 52% (n=2352; range: 37-76%) stated that reasons for prescribing the antibiotic were explained
- Participants trusted advice offered by pharmacists:
 - 67% (n=7987; range: 55-83%) agreed that pharmacists offer good advice about antibiotics; 77% (n=9281; range: 71-88%) agreed that they provide a range of effective products for respiratory conditions and 83% (n=9905; range: 75-89%) agreed that pharmacists should warn people if there are antibiotics in their medication

CONCLUSIONS

- Just over half of participants had taken antibiotics for a respiratory condition; cold and flu were two of the top three conditions for taking antibiotics. This demonstrates a lack of knowledge on how antibiotics work and suggests that more needs to be done to increase education and awareness on appropriate use
- Amongst those who obtained antibiotics through an HCP, just over a quarter were given information about AMR. In addition, nearly half the participants obtained an antibiotic without a prescription, and almost one-fifth used leftover antibiotics. This highlights the importance of advising patients about the correct use and disposal of antibiotics and the risks of AMR
- A substantial number of participants agreed that pharmacists offer good advice about antibiotics and provide a range of effective symptomatic treatment options for respiratory symptoms. In addition, eight in 10 participants agreed that pharmacists should warn people if there are antibiotics in their medication. The results demonstrate that pharmacists are trusted HCPs, and interactions with pharmacists provide opportunities to drive education and awareness on antibiotic use and antibiotic resistance to help mitigate AMR
- Over three-quarters of participants sought some form of advice on how to treat their respiratory symptoms on the last occasion
 - Almost four in 10 participants utilised pharmacists as their first point of contact for advice on respiratory symptoms, presenting an opportunity for pharmacists to provide advice on symptomatic treatment options
 - Meanwhile, almost two in 10 participants sought advice online via a general search engine. This may present an opportunity for HCPs to educate patients about antibiotic use and AMR via the online channel