

# **Special Eurobarometer 407**

# **ANTIMICROBIAL RESISTANCE**

# **REPORT**

Fieldwork: May – June 2013

Publication: November 2013

This survey has been requested by the European Commission, Directorate-General for Health and Consumers (DG SANCO) and co-ordinated by Directorate-General for Communication (DG COMM "Research and Speechwriting" Unit)

http://ec.europa.eu/public\_opinion/index\_en.htm

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Conducted by TNS Opinion & Social at the request of the European Commission, Directorate-General for Health and Consumers (DG SANCO)

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### **INTRODUCTION**

Antimicrobial agents are synthetic or natural substances used to destroy or prevent the growth of bacteria, viruses and other micro-organisms (antibiotics are microbial agents which only react against bacteria). Since penicillin was introduced in the 1940s, antimicrobial medicines have been used for the medical treatment of humans and animals and as disinfectants and preservatives. They have played an essential role in treating infectious diseases and reducing the risk of post-surgical complications.

However, there is increasing concern that antimicrobial agents are declining in effectiveness, with the emergence and spread of microbes, which are resistant to the most affordable and effective drugs. While the emergence of resistant microorganisms is a natural biological phenomenon, it is exacerbated by the inappropriate use of antibiotics in human and veterinary medicine and their unnecessary use in non-therapeutic situations, and also by environmental pollution involving antibiotics. The rise of resistant microbes is a threat to global public health. It is responsible for the avoidable deaths of humans and animals, increased healthcare and veterinary costs, and productivity losses.

In response, the European Union has put in place a Community strategy against antimicrobial resistance. This strategy is intended to prevent the spread of microbial infections, ensure the appropriate use of antimicrobials, and undertake research into effective ways to combat resistance. Given the widespread persistence of misconceptions about the nature and effectiveness of antimicrobials, communication, education and training forms an integral part of this strategy. Since 2008, the European Centre for Disease Prevention and Control (ECDC) has coordinated the "European Antibiotic Awareness Day" (EAAD), a European health initiative that provides a platform for and supports national campaigns to raise awareness on prudent use of antibiotics.

As part of this strategy, the European Commission seeks to monitor levels of public use of and knowledge about antibiotics. The Directorate-General for Health and Consumers commissioned an EU wide survey in late 2009, published in April 2010 as Special Eurobarometer 338<sup>3</sup>. The current tracker survey uses the same questions as in 2009, and the report addresses the same key objectives:

- to identify the use of antibiotics among the EU public: the frequency with which they take antibiotics, how they obtained them, and for what reason they took them;
- to measure the levels of public knowledge about the nature and effectiveness of antibiotics and the risks associated with their unnecessary use;
- to determine the impact of antibiotic awareness campaigns on the knowledge and actions of Europeans.

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<sup>&</sup>lt;sup>1</sup> Communication from the Commission to the European Parliament and the Council, Action plan against the rising threats from Antimicrobial Resistance, COM (2011) 748, November 15, 2011 (<a href="http://ec.europa.eu/dgs/health\_consumer/docs/communication\_amr\_2011\_748\_en.pdf">http://ec.europa.eu/dgs/health\_consumer/docs/communication\_amr\_2011\_748\_en.pdf</a>), p.4.

<sup>&</sup>lt;sup>2</sup> European Centre for Disease Prevention and Control, "European Antibiotic Awareness Day", (http://ecdc.europa.eu/en/eaad/Pages/Home.aspx).

http://ec.europa.eu/health/antimicrobial\_resistance/eurobarometers/index\_en.htm

The report covers today's 28 EU Member States. Note that as the fieldwork took place before the official date of Croatia's accession to the European Union on 1 July 2013, results are presented for the EU27 Member States and Croatia.

This survey was carried out by TNS Opinion & Social network in the 27 Member States of the European Union and in Croatia between the 24<sup>th</sup> of May and 9<sup>th</sup> of June 2013<sup>4</sup>. 27.680 respondents from different social and demographic groups were interviewed faceto-face at home in their mother tongue on behalf of the European Commission, Directorate-General for Health and Consumers (DG SANCO). The methodology used is that of Eurobarometer surveys as carried out by the Directorate-General for Communication ("Research and Speechwriting" Unit)<sup>5</sup>. A technical note on the manner in which interviews were conducted by the Institutes within the TNS Opinion & Social network is appended as an annex to this report. Also included are the interview methods and confidence intervals<sup>6</sup>.

<u>Note:</u> In this report, countries are referred to by their official abbreviation. The abbreviations used in this report correspond to:

		ABBREVIATION	S
BE	Belgium	LV	Latvia
CZ	Czech Republic	LU	Luxembourg
BG	Bulgaria	HU	Hungary
DK	Denmark	MT	Malta
DE	Germany	NL	The Netherlands
EE	Estonia	AT	Austria
EL	Greece	PL	Poland
ES	Spain	PT	Portugal
FR	France	RO	Romania
ΙE	Ireland	SI	Slovenia
ΙT	Italy	SK	Slovakia
CY	Republic of Cyprus*	FI	Finland
LT	Lithuania	SE	Sweden
		UK	The United Kingdom
HR	Croatia	EU27	European Union - 27 Member States
		EU15	BE, IT, FR, DE, LU, NL, DK, UK, IE, PT, ES, EL, AT, SE, FI**
		NMS12	BG, CZ, EE, CY, LT, LV, MT, HU, PL, RO, SI, SK***
		EURO AREA	BE, FR, IT, LU, DE, AT, ES, PT, IE, NL, FI, EL, EE, SI, CY, MT, SK

<sup>\*</sup> Cyprus as a whole is **one of the 27 European Union Member States. However, the 'acquis communautaire' has** been suspended in the part of the country which is not controlled by the government of the Republic of Cyprus. For practical reasons, only the interviews carried out in the part of the country controlled by the government of **the Republic of Cyprus are included in the 'CY' category and in the EU27 average**.

<sup>\*\*</sup> EU15 refers to the 15 countries forming the European Union before the enlargements of 2004 and 2007

<sup>\*\*\*</sup> The NMS12 are the 12 'new Member States' which joined the European Union during the 2004 and 2007 enlargements

<sup>&</sup>lt;sup>4</sup> Croatia was not a member state of the European Union when fieldwork was carried out; therefore results are presented as EU27 plus Croatia.

<sup>&</sup>lt;sup>5</sup> http://ec.europa.eu/public\_opinion/index\_en.htm.

<sup>&</sup>lt;sup>6</sup> The tables of results are included in the annex. It should be noted that the total of the percentages in the tables of this report may exceed 100% when the respondent has the possibility of giving several answers to the question.

\* \* \* \* \*

We wish to thank all the people interviewed throughout Europe who took the time to participate in this survey.

Without their active participation, this survey would not have been possible.

#### MAIN FINDINGS

- Just over one third (35%) of respondents say that they have taken antibiotics in oral form at any time in the last 12 months, a decline of 5 percentage points since the last survey in 2009.
  - Differences between countries on this question are quite significant, but less pronounced and regionally differentiated than in 2009.
  - Women are significantly more likely to take antibiotics than men, and those with low levels of education and worse economic circumstances are more likely to take them than their counterparts.
  - The vast majority of Europeans obtain antibiotics from their health care provider, and flu and bronchitis are the most commonly cited reasons for taking these medicines.
  - Those with better levels of objective knowledge about antibiotics are more likely to take them for illnesses and symptoms that antibiotics are able to treat.
- Only over a fifth (22%) of Europeans give the correct answer to four questions about antibiotics, and the European average of correct answers is 2.4 out of 4. These figures are very similar to those recorded in 2009.
  - Most Europeans (84%) are aware that unnecessary use of antibiotics makes them become ineffective, and two thirds (66%) know that frequent use of antibiotics can lead to side-effects.
  - However, nearly half (49%) of Europeans do not know that antibiotics are ineffective against viruses, and over two fifths (41%) do not know that they are ineffective against colds and flu.
  - Despite the fact that antibiotics cannot treat flu, nearly a fifth (18%) of respondents say it was the reason they last took antibiotics.
  - Those with low levels of education are particularly likely to have misconceptions about the nature and efficacy of antibiotics.
- Only a third (33%) of respondents remember receiving information about not taking antibiotics unnecessarily in the last 12 months: in 2009, just over a third (37%) did.
  - The proportion of respondents who received information varies considerably by country: in France, slightly under two thirds (65%) of respondents recall receiving information about the unnecessary use of antibiotics, but in Portugal only just over one in ten (12%) do.

- Almost a fifth (19%) of all respondents say that they received this information from media or communication campaigns, and the most common source was television advertisements, cited by one in ten (10%) of those polled. Over one in ten (11%) respondents received information from professionals; in the majority of cases, from a doctor (9%).
- Only just over a third (36%) of those respondents who received information about the misuse of antibiotics say that the information changed their views on antibiotics, a proportion which remains unchanged since 2009.
- Respondents in southern European or NMS12 countries and respondents with poor levels of knowledge about antibiotics are more likely to have had their views changed by the information they received.
- Most (74%) of the respondents whose views were changed by information on antibiotics say that, as a result, they will always consult a doctor in situations when they think they need an antibiotic.
- Among those respondents who received information, just over four fifths (82%) of those with low levels of objective knowledge about antibiotics say that, in future, they will consult a doctor about the use of antibiotics, compared with 69% of those who have good knowledge.
- Four fifths (80%) of those who received advice on antibiotics from a professional say that they will consult a doctor in future, compared with only just over two thirds (69%) of those who received information via media campaigns.
- Almost all (94%) respondents would choose to see a medical professional in order to get trustworthy information about antibiotics, and in particular they would opt to see a doctor (88%).
- Most (79%) respondents agree with the argument that everybody has a role to play to ensure that antibiotics remain effective. However, since 2009 the proportion of respondents who 'totally agree' has declined from just over two fifths (42%) to just over one third (36%).
- Two key conclusions emerge from these findings:
  - Media campaigns are efficient at disseminating information, but they should be targeted more effectively at those who currently lack knowledge.
  - Information can only take us so far: as trusted and influential authorities, doctors and pharmacies have a key role to play in changing views and behaviour.

## I. USE OF ANTIBIOTICS

The first set of questions deals with respondents' use of antibiotics, asking about the frequency with which they took them, how they obtained them, and the reason for which they took them.

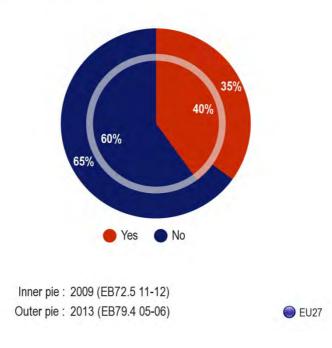
#### 1. ANTIBIOTICS USE DURING THE LAST YEAR

## -More than a third of Europeans have taken antibiotics-

Firstly, respondents were asked whether they have taken antibiotics in oral form at any time in the last 12 months.<sup>7</sup>

Over one third (35%) of respondents said that they have taken antibiotics during the last year. This figure shows a significant decline in comparison with the results of the 2009 Eurobarometer survey, when two fifths (40%) said they had taken antibiotics.

QE1a. Have you taken any antibiotics orally such as tablets, powder or syrup in the last 12 months?

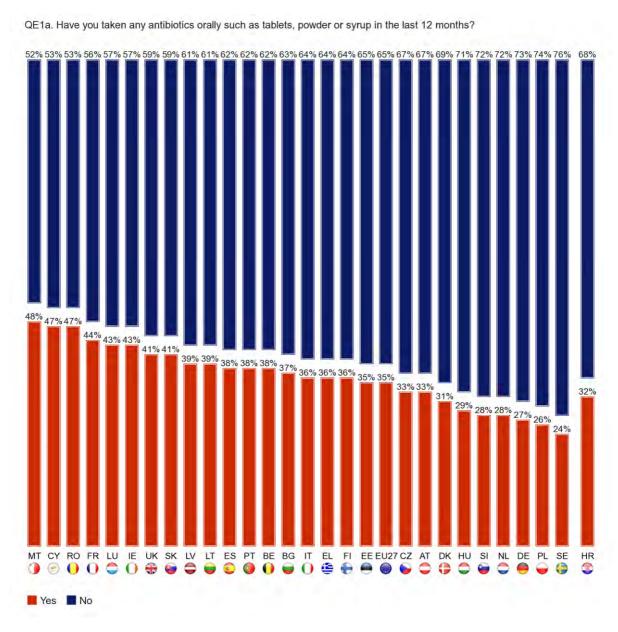


Base: all respondents (N= 26 680)

7

 $<sup>^7</sup>$  QE1a. Have you taken any antibiotics orally such as tablets, powder or syrup in the last twelve months? ONE ANSWER **ONLY.** "Yes", "No".

There is a significant difference between Member States, although variation is less marked than in 2009. In all countries, fewer than half of the respondents say that they have taken antibiotics. However, while nearly half of those polled in Malta (48%), Cyprus (47%) and Romania (47%) answer positively, only around a quarter of those polled in Sweden (24%) and Poland (26%) have taken antibiotics in the course of the last year.



Base: all respondents (N= 26 680)

In 2009, there was a clear distinction between southern European countries, where respondents were more likely to say that they used antibiotics, and other European countries, where respondents were less likely to do so.<sup>8</sup> This pattern is not evident in the present survey, as a result of changes at the country level. In every Member State except the Czech Republic, there is a change in the proportion of respondents who say that they have taken antibiotics in the last year, compared with 2009. In 14 countries, there is an increase, and in 12 a decrease.<sup>9</sup>

In most countries, the change is of less than 10 percentage points. However, in some Member States the differences from 2009 are dramatic. In Italy, the proportion of those taking antibiotics has declined by 21 percentage points and, in Spain, it has declined by 15 percentage points. The biggest increases are found in Latvia (+8 percentage points), Portugal (+5 percentage points) and Finland (+4 percentage points).



Base: all respondents (N= 26 680)

<sup>8</sup> European Commission: Eurobarometer 338/Wave 72.5, November – December 2009, TNS OPINION & SOCIAL, Brussels, April 2010, (<a href="http://ec.europa.eu/health/antimicrobial\_resistance/docs/ebs\_338\_en.pdf">http://ec.europa.eu/health/antimicrobial\_resistance/docs/ebs\_338\_en.pdf</a>), p.13.

p.13.  $^{9}$  Croatia is not taken into account in the analysis of change over time, as this country was not surveyed in  $_{2009}$ 

There are a few noteworthy differences between **socio-economic groups** of respondents:

- Women (39%) are more likely than men (32%) to have taken antibiotics in the last year. This difference is similar to that observed in 2009.
- Education does not influence the likelihood of taking antibiotics in the last 12 months. Respondents whose education ended at or before the age of 15 are just as likely to have taken antibiotics as those who finished their education at or after the age of 20.
- Those in more secure economic circumstances are less likely to have used antibiotics. Slightly over two fifths (41%) of respondents who have difficulty paying their bills 'most of the time' have used them, compared with a third of those who 'almost never' have trouble paying bills (33%).
- It is particularly striking that nearly half (46%) of those who say they received information on the misuse of antibiotics nevertheless take them, compared with under a third (30%) of those who say they did not receive this information. In a similar vein, slightly more of those who say this information has changed their views on the use of antibiotics nevertheless say that they have taken these medicines (48%, compared with 44% of those who say the information has not changed their views). This runs counter to the expectation that levels of antibiotic use should be lower among those Europeans who had received information about their misuse.

QE1a Have you taken any antibiotics orally such as tablets.

powder or syrup in the last 12 months? Yes No EU27 35% 65% 14 Sex 68% Male 32% Female 39% 61% **Education (End of)** 15-38% 62% 16-19 35% 65% 20+ 35% Still studying 36% 64% Difficulties paying bills Most of the time 41% 59% From time to time 38% 62% Almost never 33% 67% Received information Yes 46% 54% No 30% 70% Changed their views on antibiotics (info) Yes 48% 52% No

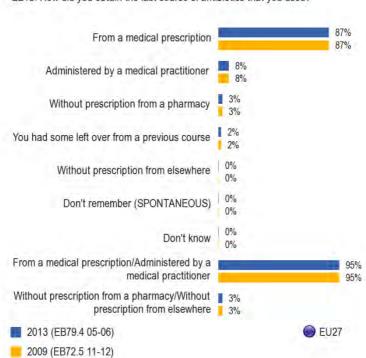
Base: all respondents (N= 26 680)

#### 2. WAYS OF OBTAINING ANTIBIOTICS

# -The vast majority of Europeans obtain antibiotics from their health care provider-

To establish the most common sources of antibiotics used by European citizens, the survey asked how respondents obtained the last course of antibiotics they used. 10 It is important to identify how Europeans obtain antibiotics, as the Community strategy on the prudent use of antimicrobials emphasises the need for Member States to ensure that systemic antibacterial agents, such as antibiotics, be limited to prescription-only use. 11

Almost all (95%) respondents say that they obtained their last course of antibiotics from their health care provider. By far the most common source of antibiotics was a medical prescription (87%), but a further 8% received antibiotics directly from a medical practitioner. Notably, there is a persistent minority who still consume antibiotics without a prescription (3%) or use those left over from a previous course (2%).



QE1b. How did you obtain the last course of antibiotics that you used?

Base: respondents who have taken antibiotics (N= 9 438)

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 $<sup>^{10}</sup>$  QE1b How did you obtain the last course of antibiotics that you used? ONE ANSWER ONLY. "From a medical prescription", "Administered by a medical practitioner", "You had some left over from a previous course", "Without prescription from a pharmacy", "Without prescription from elsewhere", "Don't remember

<sup>(</sup>SPONTANEOUS)", "Don't know".

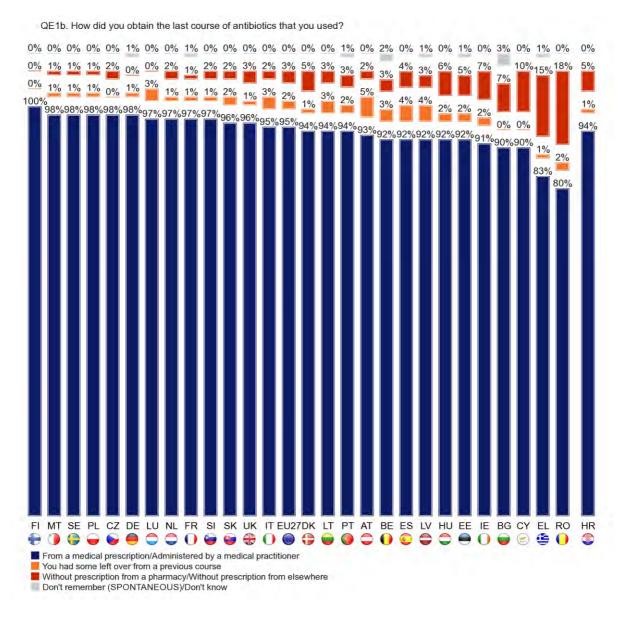
The results for the answers "From a medical prescription" and "Administered by a medical practitioner" are regrouped into the answer "From a medical prescription/Administered by a medical practitioner"; the results for the answers "Without prescription from a pharmacy" and "Without prescription from elsewhere" are regrouped into the answer "Without prescription from a pharmacy/ Without prescription from elsewhere"; the results for the answers "Don't remember (SPONTANEOUS)" and "Don't know" are regrouped into the answer "Don't remember (SPONTANEOUS)/Don't know".

<sup>11</sup> Council Recommendation of 15 November 2001 on the prudent use of antimicrobial agents in human medicine, (2002/77/EC), http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:034:0013:0016:EN:PDF

To better highlight one of the key results of the data analysis, the items 'from a medical prescription' and 'administered by a medical practitioner' are grouped as one item in the table below and the items 'without prescription from a pharmacy' and 'without a prescription from elsewhere' as a separate item.

In all countries a substantial majority of respondents say they obtained antibiotics from their health care provider. The lowest levels are found in Romania (80%) and Greece (83%). In all other countries at least nine in ten (90%) of those polled obtained antibiotics in this way. In Finland, all respondents (100%) did.

There are notable differences between Member States in the proportions of respondents who obtained antibiotics without prescription. Almost all of this variation is due to respondents obtaining antibiotics from a pharmacy without a prescription, rather than obtaining them from a non-medical source.



Base: respondents who have taken antibiotics (N= 9 438)

In seven countries – with the exception of Finland, all being NMS12 Member States – the proportion of those obtaining antibiotics from a health care provider has increased, most significantly in Lithuania, where it has risen by 8 percentage points. In 11 countries, the proportion has not changed since 2009. In nine countries, the proportion has decreased: in Greece by 6 percentage points, in Ireland by 5 percentage points, and in Portugal and Cyprus by 4 percentage points.



Base: respondents who have taken antibiotics (N= 9 438)

This following section provides a more detailed country-by-country analysis as to the way antibiotics are obtained. All the possible answers are analysed separately, and interpretations provided as to the most notable country differences.

As to antibiotics obtained from health care providers, we find that in all but three countries, three quarters (75%) or more of those taking antibiotics obtained them from a medical prescription. This is very similar to the situation in 2009. However, in Lithuania fewer than half (43%) of those polled obtained antibiotics from a medical prescription, while, in Sweden, two-thirds (66%) did. In both countries, these proportions have increased by 8 percentage points since 2009. By contrast, in Greece just under three quarters (73%) of respondents obtained antibiotics in this way, a decline of 8 percentage points.

In most cases, fewer than a fifth (20%) of respondents received antibiotics directly from a medical practitioner. In Hungary, France and Slovakia, only 1% did. However, in Lithuania, slightly over half (51%) of those polled say they received antibiotics directly (unchanged since 2009) and, in Sweden, just under a third (32%, a decrease of 8 percentage points). The biggest increase is found in Malta, where just over a fifth (21%) of respondents say they received antibiotics directly, compared with 15% in 2009.

In most Member States, only a small minority of respondents obtained antibiotics from a pharmacist without prescription. No respondents in Finland, Germany or Luxembourg give this answer. However, proportions are significantly higher in Romania (17%), Greece (15%) and Cyprus (10%). While, for the most part, changes since 2009 are minimal, Greece has seen an 8 percentage point increase in the proportion of those obtaining antibiotics in this way, Ireland an increase of 5 percentage points, while, in Lithuania, the proportion decreased by 5 percentage points. As noted above, both Greece and Ireland have seen significant decreases in the proportion of respondents who obtained antibiotics on prescription.

Very few respondents say they used left-over medicines for their most recent course of antibiotics. The highest proportion is found in Austria, where 5% of respondents give this answer (an increase of 3 percentage points since 2009), followed by Spain (4%, +1 percentage point) and Latvia (4%, -1 percentage point).

Hardly any respondents say that they obtained their last course of antibiotics from elsewhere (i.e. neither from their healthcare practitioner nor off-prescription from a pharmacy). In 14 of the EU27 Member States, none of those polled give this answer. The largest proportion can be found in Denmark, where 3% say they obtained antibiotics in this way.

As in 2009, there are no significant differences between **socio-demographic groups** on this question. The low response levels for all options other than 'From a medical prescription' mean that differences in those categories – which in most countries are minimal – are not statistically significant. However, those with good knowledge of antibiotics are slightly more likely to have obtained their last course of antibiotics with a medical prescription (89%, compared with 85% of those whose knowledge of antibiotics is poor).

#### QE1b How did you obtain the last course of antibiotics that you used?

		From a medical prescription		Administered b	y a medical practitioner	Without prescri	iption from a pharmacy		left over from a previous course	Without presci	ription from elsewhere		orescription/Administered dical practitioner	pharmacy/Wit	rescription from a hout prescription from Isewhere
		2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)
	EU27	87%	=	8%	=	3%	=	2%	=	0%	=	95%	=	3%	=
	BE	83%	-5	9%	+2	2%	=	3%	+1	1%	+1	92%	-3	3%	+1
	BG	79%	=	11%	-1	7%	+2	0%	-1	0%	-1	90%	-1	7%	+1
	CZ	91%	+1	7%	-1	1%	=	0%	-1	1%	+1	98%	=	2%	+1
	DK	77%	-3	17%	=	2%	+2	1%	=	3%	+1	94%	-3	5%	+3
	DE	89%	-3	9%	+3	0%	-1	1%	=	0%	=	98%	=	0%	-1
	EE	79%	+6	13%	-2	3%	-2	2%	-2	2%	-1	92%	+4	5%	-3
O	IE	81%	-1	10%	-4	6%	+5	2%	+2	1%	=	91%	-5	7%	+5
<b>(</b>	EL	73%	-8	10%	+2	15%	+8	1%	-2	0%	-1	83%	-6	15%	+7
	ES	84%	+5	8%	-5	3%	-1	4%	+1	1%	=	92%	=	4%	-1
O	FR	96%	+1	1%	-1	1%	=	1%	=	0%	-1	97%	=	1%	-1
<b>O</b>	IT	88%	-2	7%	+2	2%	+1	3%	=	0%	-1	95%	=	2%	=
<b>(5)</b>	CY	84%	-3	6%	-1	10%	+4	0%	=	0%	=	90%	-4	10%	+4
	LV	85%	+4	7%	=	3%	-3	4%	-1	0%	-1	92%	+4	3%	-4
	LT	43%	+8	51%	=	2%	-5	3%	-2	1%	=	94%	+8	3%	-5
	LU	94%	-1	3%	=	0%	=	3%	+2	0%	-1	97%	-1	0%	-1
	HU	91%	-1	1%	+1	5%	=	2%	=	1%	+1	92%	=	6%	+1
	MT	77%	-2	21%	+6	1%	-3	1%	=	0%	=	98%	+4	1%	-3
	AT	82%	-2	11%	+2	1%	-3	5%	+3	1%	=	93%	=	2%	-3
	NL	82%	-2	15%	+2	1%	=	1%	=	1%	=	97%	=	2%	=
	PL	96%	+2	2%	=	1%	=	1%	=	0%	=	98%	+2	1%	=
	PT	88%	-5	6%	+1	2%	+1	2%	+1	1%	+1	94%	-4	3%	+2
	R0 SI	75%	+5	5% 5%	-4	17% 2%	+1	2%	-1	1%	+1	80% 97%	+1 =	18% 2%	+2
<b>—</b>	SK	92% 95%	+6	1%	-6 -1		=	1% 2%	+1 =	0%	=	97%	=		=
<b>9</b>	SK FI	95%	+1	1% 7%	-1 -2	2% 0%	-1	0%	=	0%	=	100%	+1	2%	-1
	SE	93% 66%	+3	32%	-2	1%	-1	1%	=	0%	=	98%	=	1%	-1
<b>⊕</b>	UK	87%	+1	9%	-2	2%	=	1%	+1	1%	=	96%	-1	3%	=
	HR	90%	*	4%	*	4%	*	1%	*	1%	*	94%	*	5%	*

\*This question was not asked in Croatia in 2009

Base: respondents who have taken antibiotics (N= 9 438)

#### 3. REASONS FOR TAKING ANTIBIOTICS

# -Flu and bronchitis are the most common reasons for taking antibiotics-

Respondents who said they had taken antibiotics in the last year were asked for what reasons they had taken them. The interviewer presented respondents with a card on which a variety of illnesses and symptoms were printed, some of which antibiotics treat effectively (e.g. pneumonia) and some of which antibiotics are ineffective at treating (e.g. cold, flu).<sup>12</sup> This question allows us to determine the extent to which Europeans use antibiotics appropriately.

The most common responses among the listed options are flu (18%, down from 20% in 2009) and bronchitis (18%, up from 17% in 2009). Compared with 2009, fewer respondents say they take antibiotics to treat a sore throat (11%, compared with 15% in 2009). Other differences over time are of negligible magnitude.

The most common answer is non-specific, with slightly over a fifth (21%) of those polled saying that they took antibiotics for reasons other than the list of options given to them.

One in ten (10%) of those taking antibiotics do so to treat both illnesses and symptoms, while more than a quarter (26%) of respondents take them to treat symptoms alone <sup>13</sup>. These proportions are very similar to those observed in 2009.

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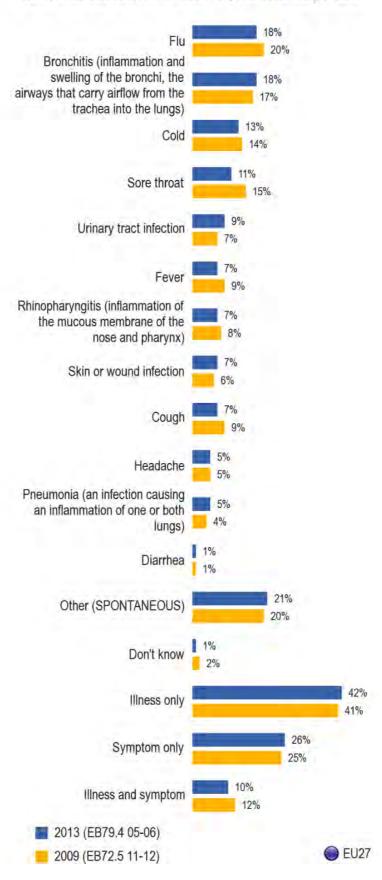
<sup>&</sup>lt;sup>12</sup> QE1c What was the reason for last taking antibiotics that you used? MULTIPLE ANSWERS POSSIBLE. "Pneumonia (an infection causing an inflammation of one or both lungs)", "Bronchitis (inflammation and swelling of the bronchi, the airways that carry airflow from the trachea into the lungs)", "Rhinopharyngitis (inflammation of the mucous membrane of the nose and pharynx)", "Flu", "Cold", "Sore throat", "Cough", "Fever", "Headache", "Diarrhea", "Urinary tract infection", "Skin or wound infection", "Other (SPONTANEOUS)", "Don't know".

<sup>&</sup>lt;sup>13</sup> The results for the answers "Pneumonia (an infection causing an inflammation of one or both lungs)", "Bronchitis (inflammation and swelling of the bronchi, the airways that carry airflow from the trachea into the lungs)", "Rhinopharyngitis (inflammation of the mucous membrane of the nose and pharynx)", "Flu" and "Cold" are regrouped into the answer "Illness only"

are regrouped into the answer "Illness only".

The results for the answers "Sore throat", "Cough", "Fever", "Headache", "Diarrhea", "Urinary tract infection" and "Skin or wound infection" are regrouped into the answer "Symptom only".

Any combination of answers containing at least one answer used in the regrouping "Illness only" and at least one answer used in the regrouping "Symptom only" is regrouped into the answer "Illness and symptom".



Base: respondents who have taken antibiotics (N=9438) (MULTIPLE ANSWERS POSSIBLE)

The following table displays country-level answers for five commonly cited illnesses or symptoms. There are clear differences between respondents in different Member States on the question as to the reason for their last course of antibiotics. <sup>14</sup>

- In Bulgaria, one third (34%) of respondents take antibiotics to combat flu, with Cyprus (31%) and Malta (30%) not far behind. At the other extreme, only 6% of respondents in the Netherlands and Sweden take antibiotics in these circumstances, as do 7% of those polled in Finland and 8% in Denmark. The biggest increases since 2009 in the proportion of those using antibiotics against flu are found in Bulgaria and France (+8 percentage points), Latvia (+7 percentage points) and Romania (+6 percentage points). The decrease is largest in Spain, where the proportion of respondents is down by 12 percentage points. There have also been significant decreases in Germany and Italy, where the proportion has declined by 6 percentage points.
- One third of those polled in the Czech Republic (34%), Austria (34%) and Slovakia (32%) say they took antibiotics to treat bronchitis. However, only a small minority give this answer in Sweden (4%) and Denmark (6%). In Austria, the proportion of those mentioning bronchitis has risen by 11 percentage points. Other significant increases have occurred in the Czech Republic and Slovakia (+7 percentage points), and in Italy and Lithuania (+6 percentage points). The only significant decreases have occurred in Ireland (-6 percentage points) and the Netherlands (-5 percentage points).
- There are substantial differences between Member States on the question of whether respondents had used antibiotics to treat a cold. In comparison with the EU27 average of 13%, Romania stands out with a particularly high figure: over one third (35%) of respondents in that country say they used antibiotics to treat a cold. Around a quarter of respondents give the same answer in Bulgaria and Greece (both 23%), in Cyprus and Austria (both 24%) and in Latvia (26%). In Sweden and Denmark, only 3% of respondents do. In the majority of Member States, there has been only negligible change since 2009: the exceptions are Malta, Spain and Bulgaria, where the proportion has decreased by 6, 7 and 9 percentage points, respectively, and Germany and Ireland, where it has increased by 6 and 7 percentage points, respectively.
- On the question of whether respondents used antibiotics to treat a sore throat, most Member States are reasonably close to the EU27 average of 11%. The most prominent differences are Malta and Croatia (both 30%), Hungary (27%) and Slovakia (25%).<sup>15</sup> No country stands out as particularly low: the smallest proportions giving this answer are found in Luxembourg, Romania and the Netherlands (each 6%).

<sup>15</sup> It should be remembered that Croatia is not taken into account when calculating the EU27 average shown in the tables.

<sup>&</sup>lt;sup>14</sup> Antibiotics are effective in treating urinary tract infection, but ineffective against colds and flu, which are caused by viruses. Most sore throats and bronchial infections are caused by viruses and should not be treated with antibiotics, but in some cases bacteria can be the cause of these illnesses, and then antibiotics are appropriate.

Again, in most countries, only small changes have occurred since 2009. There are two prominent countries, though: in Spain and Austria, the proportion of those using antibiotics to treat a sore throat has decreased by 12 percentage points. In Portugal, it has decreased by 6 percentage points.

- The lowest degree of country-level variation occurs in the case of urinary tract infection. The highest proportions of respondents saying that they used antibiotics to treat this illness are found in the Netherlands (17%), Denmark and Sweden (both 15%) and the Czech Republic (14%). The lowest proportions are found in Latvia and Lithuania (3%). The most significant changes since 2009 are in Sweden, where the proportion dropped by 8 percentage points, and the United Kingdom, where it rose by 5 percentage points. In all other countries, change in either direction did not exceed 5 percentage points.

QE1c What was the reason for last taking antibiotics that you used?\*

	Flu		Bronchitis (inflammation and swelling of the bronchi, the airways that carry airflow from the trachea into the lungs)		Cold		Sore throat		Urinary tract infection	
	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-0 2009 (EB72.5 11-1
EU27	18%	-2	18%	+1	13%	-1	11%	-4	9%	+2
BE	17%	-1	24%	=	9%	-3	10%	-4	8%	+3
BG	34%	+8	21%	+5	23%	-9	17%	-1	5%	=
CZ	16%	-3	34%	+7	5%	-3	12%	-2	14%	=
DK	8%	-2	6%	-1	3%	=	9%	-1	15%	+1
DE	17%	-6	21%	+1	17%	+6	7%	-1	8%	-1
EE	14%	+1	13%	+1	16%	+1	9%	+2	8%	+4
IE	20%	+5	16%	-6	12%	+7	16%	+1	8%	-2
EL	22%	-3	8%	=	23%	-4	14%	-3	4%	=
ES	20%	-12	8%	=	17%	-7	13%	-12	8%	+4
FR	16%	+8	19%	-1	10%	+3	11%	-3	9%	+2
IT	17%	-6	30%	+6	4%	-3	16%	-3	8%	+1
CY	31%	+3	8%	-1	24%	-3	9%	=	4%	-1
LV	18%	+7	12%	-2	26%	-4	11%	-2	3%	=
LT	21%	+2	22%	+6	19%	=	13%	+3	3%	-1
LU	24%	+5	17%	+4	8%	+4	6%	-2	10%	+2
HU	24%	+2	14%	+2	19%	-4	27%	-4	4%	+1
MT	30%	+4	9%	+2	11%	-6	30%	-1	5%	+2
AT	29%	-2	34%	+11	24%	+1	11%	-12	12%	+4
NL	6%	+2	9%	-5	4%	=	6%	+2	17%	+2
PL	22%	+3	22%	-2	18%	-4	9%	-5	4%	=
PT	22%	=	9%	=	11%	+3	15%	-6	6%	+1
RO	26%	+6	12%	+2	35%	-5	6%	-4	7%	-1
SI	10%	+5	11%	+1	7%	=	23%	+3	10%	-1
SK	20%	-4	32%	+7	5%	-2	25%	-2	7%	-2
FI	7%	=	20%	+1	4%	+3	7%	+4	7%	-3
SE	6%	=	4%	-2	3%	=	9%	+1	15%	-8
UK	13%	+1	12%	-2	7%	=	8%	-2	12%	+5
HR	11%	**	15%	**	15%	**	30%	**	10%	**

\*Top 5 answers mentioned
\*\*This question was not asked in Croatia in 2009

Base: respondents who have taken antibiotics (N=9 438) (MULTIPLE ANSWERS POSSIBLE)

When answers are aggregated into illnesses and symptoms<sup>16</sup>, there are some clear country-level differences. In five countries – all of which are from the NMS12 group of Member States – half or more of respondents say they used antibiotics only to treat an illness: these are Poland (59%), Bulgaria (52%), Czech Republic (51%), Lithuania (51%) and Latvia (50%). Correspondingly, in all these countries the proportion of those saying they used antibiotics only to treat symptoms is lower than the EU27 average of 26%.

At the other extreme, in Slovenia (22%) and Sweden (23%), fewer than a quarter of respondents used antibiotics solely to treat an illness, while in both countries two fifths (38%) used them only for the treatment of symptoms. There is also a notable variation among the proportions of respondents who say they used antibiotics to treat both illnesses and symptoms. The highest level is found in Austria, where 29% of respondents give this answer; levels are also high in Bulgaria (23%) and Slovakia (20%).

For almost all countries, change since 2009 remains below 10 percentage points. The exceptions are in Luxembourg, where the proportion of those treating only illnesses with antibiotics declined by 11 percentage points, and Spain, where the proportion of those treating both illnesses and symptoms decreased by 15 percentage points.

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<sup>&</sup>lt;sup>16</sup> The terms 'Illness only', 'Symptom only' and 'Illness and symptom' have been defined as follows:

The results for the answers "Pneumonia (an infection causing an inflammation of one or both lungs)", "Bronchitis (inflammation and swelling of the bronchi, the airways that carry airflow from the trachea into the lungs)", "Rhinopharyngitis (inflammation of the mucous membrane of the nose and pharynx)", "Flu" and "Cold" are regrouped into the answer "Illness only"

are regrouped into the answer "Illness only".

The results for the answers "Sore throat", "Cough", "Fever", "Headache", "Diarrhea", "Urinary tract infection" and "Skin or wound infection" are regrouped into the answer "Symptom only".

Any combination of answers containing at least one answer used in the regrouping "Illness only" and at least one answer used in the regrouping "Symptom only" is regrouped into the answer "Illness and symptom".

QE1c What was the reason for last taking antibiotics that you used?

	Illr	ness only	Syn	nptom only	Illness	and symptom
	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) 2009 (EB72.5 11-12)
EU27	42%	+1	26%	+1	10%	-2
BE	48%	-2	23%	+4	14%	+4
BG	52%	-6	16%	-2	23%	+6
CZ	51%	+2	23%	-6	16%	+2
DK	42%	+9	32%	-5	7%	+2
DE	46%	-2	23%	=	7%	-2
EE	38%	+1	23%	+5	9%	0=0
IE	43%	-3	26%	-3	8%	+4
EL	44%	+1	22%	-2	14%	-1
ES	41%	+5	27%	+4	7%	-15
FR	40%	+2	25%	-3	9%	+2
IT	46%	=	31%	+5	12%	-3
CY	42%	-3	24%	+8	13%	+1
LV	50%	+4	20%	=	10%	+1
LT	51%	+5	17%	=	11%	+1
LU	39%	-11	25%	T = T	9%	+9
HU	42%	+1	32%	<del>=</del>	16%	-5
MT	28%	-6	32%	-5	19%	+4
AT	45%	-3	18%	-1	29%	+3
NL	34%	=	33%	+4	9%	+4
PL	59%	+4	16%	-1	8%	-1
PT	38%	+2	28%	-9	8%	+5
RO	48%	+5	14%	-4	18%	-4
SI	22%	-4	38%	+2	11%	+3
SK	41%	+2	29%	-1	20%	-3
Fl	45%	=	30%	+3	4%	+1
SE	23%	-1	38%	-5	4%	-2
UK	29%	=	34%	+4	5%	+1
HR	30%	*	39%	*	14%	*

\*This question was not asked in Croatia in 2009

Base: respondents who have taken antibiotics (N= 9 438) (MULTIPLE ANSWERS POSSIBLE) There are a number of clear differences between **socio-demographic groups** concerning the likelihood of taking antibiotics to treat the five illnesses and symptoms focused on in the country-level analysis:

- Use of antibiotics to treat urinary tract infections is more common in women (11%) than in men (5%), although some of this difference reflects the greater propensity of women to develop such infections. Women are also more likely to use antibiotics to treat symptoms only (28%, compared with 24% of male respondents).
- Where age is concerned, it is difficult to point out a greater propensity to use antibiotics from the greater probability that individuals in certain age groups will suffer from particular illnesses. However, one conclusion is clear: younger respondents are more likely to use antibiotics to treat illnesses for which they are not effective. Those in the 25-39 age group (20%) are more likely to use them when suffering from flu than respondents aged 55 or older (15%). Twice as many respondents in the 15-24 age group (16%) use antibiotics to treat a sore throat compared to those aged 55 or older (8%); for colds, the proportions are 18% and 11% respectively. On the other hand, 13% of those aged 15-24 use antibiotics to treat bronchitis, compared with 22% of those aged 55 and over.

As in 2009, objective knowledge of antibiotics mostly leads respondents to take antibiotics in ways consistent with that knowledge. While there is no difference in the case of sore throats, those with poor objective knowledge of antibiotics are significantly more likely to take these medicines for flu and colds (27% and 21% respectively, compared with 18% and 12% respectively of those with medium levels of knowledge and 8% and 5% respectively of those with a good level of knowledge).

The source of the information that respondents receive regarding unnecessary use of antibiotics is also important in some cases. Slightly less than a quarter (24%) of those who say they received the information from a professional took antibiotics to treat bronchitis, compared with fewer than a fifth (18%) of those who received information from family and friends. The relationship is reversed in the case of flu: 23% of those who received information from family and friends took antibiotics in these circumstances, compared with only 16% of those who gained information from professionals.

QE1c What was the reason for last taking antibiotics that you used?

	Flu	Bronchitis (inflammation and swelling of the bronchi, the airways that carry airflow from the trachea into the lungs)	Cold	Sore throat	Urinary tract infection
EU27	18%	18%	13%	11%	9%
Sex					
Male	19%	17%	14%	10%	5%
Female	17%	19%	12%	12%	11%
Age		· · · · · ·			
15-24	18%	13%	18%	16%	7%
25-39	20%	15%	12%	13%	8%
40-54	19%	17%	12%	11%	8%
55 +	15%	22%	11%	8%	10%
<u></u> ■ Difficulties paying bills					
Most of the time	20%	18%	14%	12%	8%
From time to time	19%	18%	14%	9%	9%
Almost never	16%	18%	12%	12%	9%
Objective knowledge of ant	ibiotics				
Good	8%	18%	5%	10%	13%
Average	18%	18%	12%	11%	8%
Bad	27%	16%	21%	12%	7%
Information sources on ant	ibiotics				
Advice from a professional	16%	24%	13%	10%	8%
Advice from family/friends	23%	18%	13%	13%	5%
From media/campaigns	15%	20%	10%	11%	8%
Did not receive info	19%	16%	14%	11%	9%

Base: respondents who have taken antibiotics (N= 9 438) (MULTIPLE ANSWERS POSSIBLE)

#### II. **KNOWLEDGE ABOUT ANTIBIOTICS**

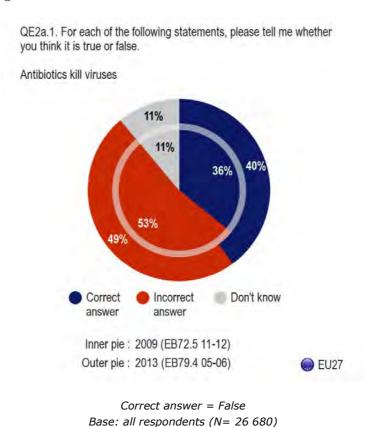
The second set of questions concern objective knowledge of antibiotics. Respondents were asked if each of four statements about antibiotics was 'true' or 'false'. The statements are as follows:

- Antibiotics kill viruses. (FALSE)
- Antibiotics are effective against colds and flu. (FALSE)
- Unnecessary use of antibiotics makes them become ineffective. (TRUE)
- Taking antibiotics often has side-effects, such as diarrhea. (TRUE)

#### 1. DO ANTIBIOTICS KILL VIRUSES?

# -Only four out of ten Europeans are aware that antibiotics are ineffective against viruses-

Respondents were asked if it is true or false that antibiotics kill viruses. 17 Four out of ten (40%) of those polled correctly replied that antibiotics do not kill viruses. This is an improvement on 2009, when 36% of respondents held this opinion. The proportion of European citizens who believe antibiotics kill viruses (49%) slightly decreased since 2009. More than one in ten (11%) Europeans could not answer the question, a proportion unchanged since 2009.



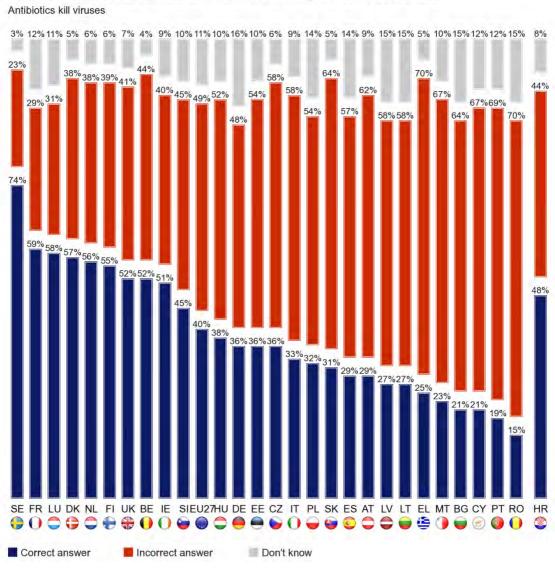
 $<sup>^{17}</sup>$  QE2a.1 For each of the following statements, please tell me whether you think it is true or false. Antibiotics kill viruses. ONE ANSWER ONLY. "True", "False", "Don't know".

There are significant differences on this question at the country level. In nine countries, a majority of respondents correctly answered that antibiotics do not kill viruses. All of these countries are in Northern or Western Europe. In Sweden, three quarters (74%) of respondents gave the correct reply. In the other eight countries, where a majority of respondents give a correct answer, the proportion ranges between 51% and 59%.

In 13 countries, only a third (33%) or fewer of those polled give the correct answer. Levels of knowledge are particularly low in Romania (15%) and Portugal (19%), closely followed by Cyprus and Bulgaria (both 21%).

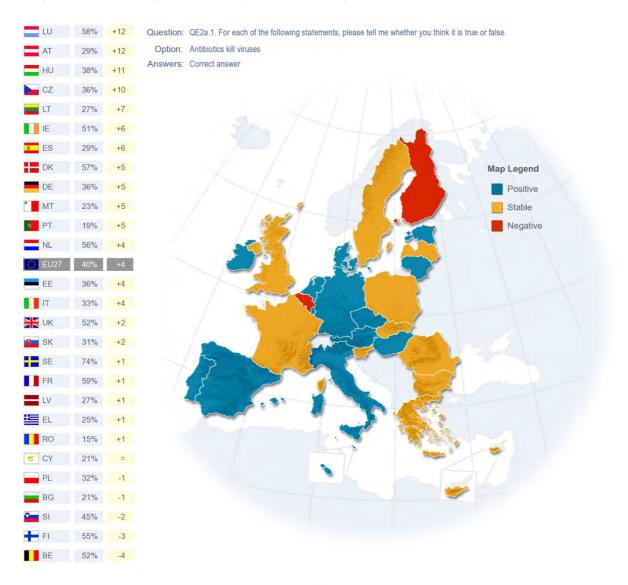
More than one in ten respondents in 11 countries answered spontaneously that they do not know the answer, the highest proportion being in Germany (16%).

QE2a.1. For each of the following statements, please tell me whether you think it is true or false.



Correct answer = False
Base: all respondents (N= 26 680)

The majority of countries saw an increase in the proportions of respondents answering this question correctly. Four countries show an increase of 10 percentage points or above: Luxembourg (+12), Austria (+12), Hungary (+11) and the Czech Republic (+10). In those countries where levels of knowledge decreased, the change was small, with the largest decline being 4 percentage points in Belgium.



2013 - 2009

Correct answer = False Base: all respondents (N= 26 680)

A number of relevant **socio-demographic differences** can be identified.

- Education has a significant influence. Only just over a quarter (27%) of those whose education ended at or before the age of 15 correctly say that antibiotics are ineffective against viruses, while more than half (52%) of those whose education ended at or after the age of 20 give this answer.
- Economic status is also influential: only around a third of those who have trouble paying bills most of the time (32%) give the correct answer, while over two fifths of those who almost never have problems paying bills (43%) do.

Although having taken antibiotics did not exert a significant effect, there is evidence that media campaigns are effective in raising awareness. Over half (52%) of those who received information about antibiotics give the correct answer to this question, compared with just over a third (34%) of those who did not receive information. Notably, 55% of those who received information from media campaigns give the correct answer and 44% of those who received advice from a professional did so in comparison to people who have not received any information of whom 34% answered correctly.

QE2a.1 For each of the following statements, please tell me whether you think it is true or false.

Antihiotice kill viruege

Anudiotics kill viruses							
Correct answer	Incorrect answer	Don't know					
40%	49%	11%					
27%	58%	15%					
37%	51%	12%					
52%	41%	7%					
40%	50%	10%					
ls							
32%	58%	10%					
35%	54%	11%					
43%	46%	11%					
n							
52%	41%	7%					
34%	53%	13%					
on antibiotics							
44%	50%	6%					
46%	49%	5%					
55%	37%	8%					
34%	53%	13%					
	27% 37% 52% 40%  Is 32% 35% 43%  1 52% 34%  on antibiotics 44% 46% 55%	Correct answer         Incorrect answer           40%         49%           27%         58%           37%         51%           52%         41%           40%         50%           Is         32%         58%           35%         54%           43%         46%           1         52%         41%           34%         53%           on antibiotics         44%         50%           46%         49%           55%         37%					

Base: all respondents (N= 26 680)

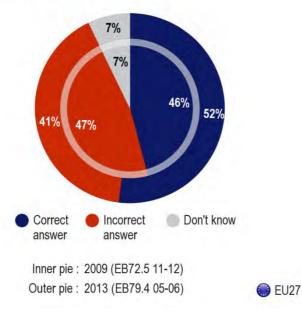
### 2. ARE ANTIBIOTICS EFFECTIVE AGAINST COLD AND FLU?

# -A slim majority of Europeans are aware that antibiotics are ineffective against cold and flu-

Respondents were asked if it was true or false that antibiotics are effective against cold and flu. <sup>18</sup> Just over half (52%) of respondents gave the correct answer that antibiotics are not effective in these cases, an increase of 6 percentage points since 2009. Again, the proportion of respondents who could not give an answer remains stable, at 7%.

QE2a.2. For each of the following statements, please tell me whether you think it is true or false.

Antibiotics are effective against cold and flu



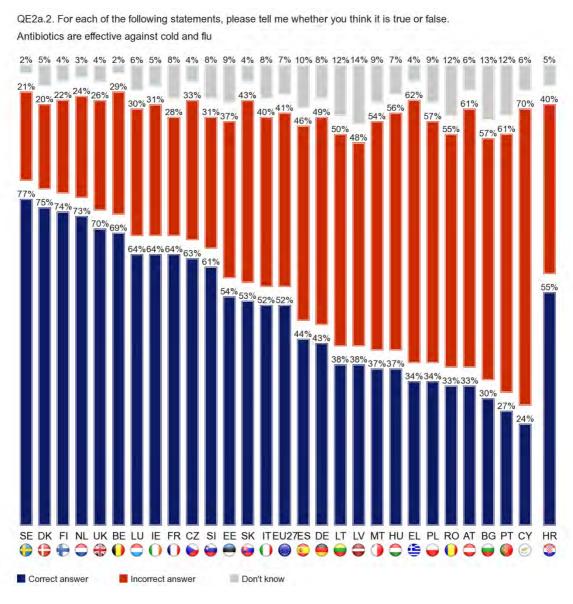
Correct answer = False Base: all respondents (N= 26 680)

28

<sup>&</sup>lt;sup>18</sup> QE2a.2 For each of the following statements, please tell me whether you think it is true or false. Antibiotics are effective against cold and flu. ONE ANSWER **ONLY.** "True", "False", "Don't know".

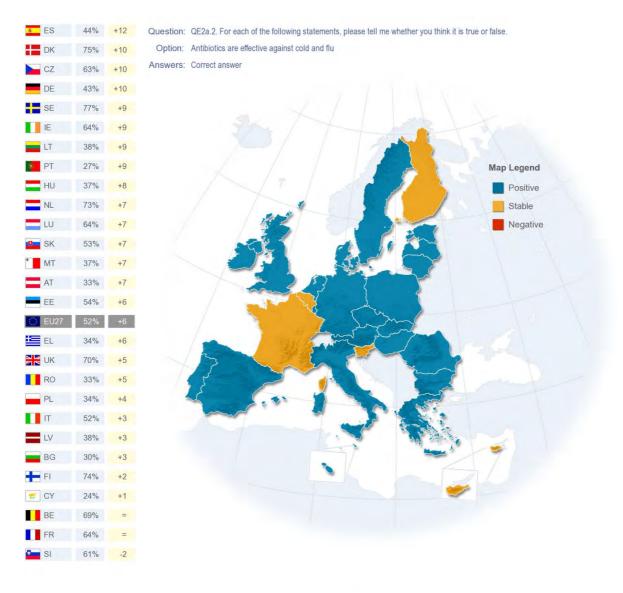
The country-level distribution shows some similarities to that for the previous question, although it is more symmetrical. In 14 Member States, the proportion of respondents giving the correct answer to this question represents the majority. As with the previous question, levels of awareness are highest in northern European states.

Around three quarters of respondents give the correct answer in Sweden (77%), Denmark (75%), Finland (74%) and the Netherlands (73%). Lower proportions of respondents in southern European countries answered correctly to this question. Only in Italy do a majority of respondents (52%) give the correct answer; in Spain, less than half (44%) do; in Malta (37%) and Greece, around a third (34%); and in Cyprus (24%) and Portugal (27%) only around quarter of respondents answer the question correctly. Lastly, Romania performs somewhat better, with a third (33%) of respondents answering the question correctly.



Correct answer = False
Base: all respondents (N= 26 680)

The proportion of respondents giving the correct answer to this question has increased since 2009 in almost all Member States. Slovenia is the only country to record a decline, and, in France and Belgium, the proportions have not changed. In light of the above comments about low levels of knowledge in southern Europe, it is worth noting that, since 2009, the proportion of those answering correctly has increased by 12 percentage points in Spain, by 9 percentage points in Portugal and by 7 percentage points in Malta. Significant increases are also observed in countries with fewer users of antibiotics, such as Denmark, the Czech Republic and Germany (all +10 percentage points).



Correct answer = False Base: all respondents (N= 26 680)

2013 - 2009

## A **socio-demographic analysis** of the results reveals the following:

- Women (55%) are more likely than men (48%) to give the correct answer that antibiotics are not effective against colds and flu.
- Younger respondents are less likely than other respondents to give the correct answer. Around four out of 10 respondents (41%) of the 15 to 24 age cohort give the correct answer, compared with the EU27 average of 52%.
- Again, education has a clear impact: around four out of 10 respondents (41%) of those who finished education at the age of 15 or earlier give the correct answer, compared with nearly two thirds (63%) of those who finished at 20 or later.
- Economic circumstances also matter. Those who are in a more vulnerable position are less likely to give the correct answer, with only 45% of those who have trouble paying bills most of the time saying that antibiotics are ineffective in the case of cold and flu. In contrast, 55% of those who have almost no problems paying bills give the correct answer.

The positive role of media campaigns is again clear. Just under two thirds (65%) of those who have received information regarding the unnecessary use of antibiotics give the correct answer in this case, compared with fewer than half (45%) of those who did not receive any information. Nearly three quarters (71%) of those who received information from the media answered correctly and 58% of those who received information from professionals did so, in comparison to 45% of those who did not receive any information.

QE2a.2 For each of the following statements, please tell me whether you think it is true or false.

Antibiotics are effective against cold and flu

	Correct answer	Incorrect answer	Don't know		
EU27	52%	41%	7%		
Sex Sex					
Male	48%	43%	9%		
Female	55%	39%	6%		
Age					
15-24	41%	50%	9%		
25-39	53%	41%	6%		
40-54	57%	37%	6%		
55 +	51%	40%	9%		
Education (End of)					
15-	41%	50%	9%		
16-19	51%	42%	7%		
20+	63%	32%	5%		
Still studying	44%	47%	9%		
■ Difficulties paying bil	ls				
Most of the time	45%	47%	8%		
From time to time	48%	44%	8%		
Almost never	55%	38%	7%		
Received information	1				
Yes	65%	30%	5%		
No	45%	46%	9%		
Information sources	on antibiotics				
Advice from a professional	58%	38%	4%		
Advice from family/friends	51%	42%	7%		
From media/campaigns	71%	25%	4%		
Did not receive info	45%	46%	9%		

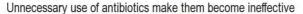
Base: all respondents (N= 26.680)

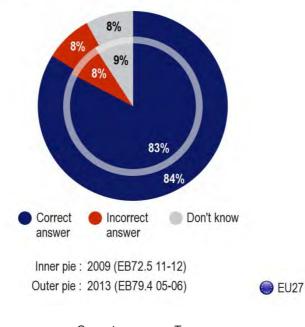
# 3. DOES UNNECESSARY USE OF ANTIBIOTICS MAKE THEM BECOME INEFFECTIVE?

# -Most Europeans are aware that unnecessary use of antibiotics makes them become ineffective-

Respondents were asked whether it was true or false that the unnecessary use of antibiotics makes them become ineffective. <sup>19</sup> A large majority (84%) of those polled gave the correct answer that the overuse of antibiotics reduces their effectiveness. Just under one in ten gave the wrong answer (8%). The distribution of answers is almost exactly the same as in 2009.

QE2a.3. For each of the following statements, please tell me whether you think it is true or false.





Correct answer = True Base: all respondents (N= 26 680)

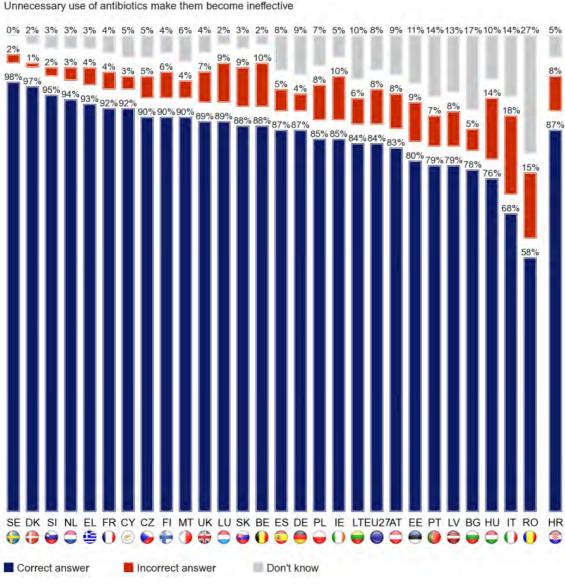
33

 $<sup>^{19}</sup>$  QE2a.3 For each of the following statements, please tell me whether you think it is true or false. Unnecessary use of antibiotics make them become ineffective. ONE ANSWER ONLY. "True", "False", "Don't know".

In all but two countries, over three quarters of respondents agree that unnecessary use of antibiotics makes them become ineffective. The exceptions are Italy, where more than two thirds (68%) agree, and Romania, where less than three fifths (58%) do. In the latter country, over a quarter (27%) of respondents cannot give an answer to this question, compared with 8% on average. The proportion of respondents unable to answer is also much higher than average in Bulgaria (17%).

Almost all respondents in Sweden (98%) and Denmark (97%) answer correctly, and more than nine in ten respondents gave correct answers in Slovenia (95%), the Netherlands (94%), Greece (93%), France (92%), and Cyprus (92%).

More than one in ten respondents in six countries answered spontaneously that they do not know the correct answer. Romania, in particular, stands out with over a quarter (27%) of respondents being unable to answer this question.



QE2a.3. For each of the following statements, please tell me whether you think it is true or false. Unnecessary use of antibiotics make them become ineffective

Correct answer = True
Base: all respondents (N= 26 680)

As we might expect from the high overall level of knowledge and the lack of overall change since 2009, country-level changes are minimal and without geographic pattern. In 15 countries, levels of knowledge have risen, with the greatest increase in France (+5 percentage points). In 10 countries, levels of knowledge have fallen, with the greatest decrease in Portugal (-5 percentage points). In the United Kingdom and Poland, there is no change.



2013 - 2009

Correct answer = TrueBase: all respondents (N= 26 680)

There is widespread agreement across **socio-demographic groups** that the unnecessary use of antibiotics renders them ineffective. Nevertheless, education once again stands out as influential: four fifths (80%) of those who finished education at or before the age of 15 give the correct answer, while less than nine in ten (89%) of those who continued their education up to or beyond the age of 20 do.

On top of the already high overall rate of agreement, information about antibiotics has a significant effect. Just over nine in ten (91%) of those who received information on antibiotics gave the correct answer to this question, compared with four fifths (80%) of those who did not. While over one in ten (11%) of those who did not receive information were unable to give an answer, only around one in twenty (4%) of those who did receive information had this problem. The vast majority (94%) of those who gained information from media campaigns give the correct answer to this question and 85% of those who consulted a professional do so compared to 80% of those who received no information.

QE2a.3 For each of the following statements, please tell me whether you think it is true or false.

## Unnecessary use of antibiotics make them become ineffective

	Correct answer	Incorrect answer	Don't know			
EU27	84%	8%	8%			
Education (End of)						
15-	80%	8%	12%			
16-19	84%	8%	8% 5%			
20+	89%	6%				
Still studying	83%	83% 8%				
Received information	1					
Yes	91%	5%	4%			
No	80%	9%	11%			
Information sources	on antibiotics					
Advice from a professional	85%	10%	5%			
Advice from family/friends	89%	6%	5%			
From media/campaigns	94%	3%	3%			
Did not receive info	80%	9%	11%			

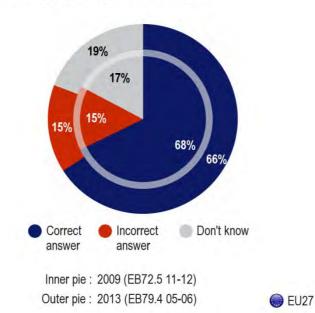
# 4. DOES TAKING ANTIBIOTICS OFTEN RESULT IN SIDE-EFFECTS SUCH AS DIARRHEA?

### -Two thirds of Europeans know that frequent use of antibiotics can lead to sideeffects-

Respondents were asked whether it is true or false that taking antibiotics often has side-effects such as diarrhea. Two thirds (66%) of respondents give the correct answer that antibiotics can produce side-effects. There is more uncertainty over this issue than the preceding ones: less than a fifth (19%) of respondents are unable to give an answer to this question. A slightly smaller proportion (15%) gives an incorrect answer. As in the previous case, little change has occurred since 2009.

QE2a.4. For each of the following statements, please tell me whether you think it is true or false.





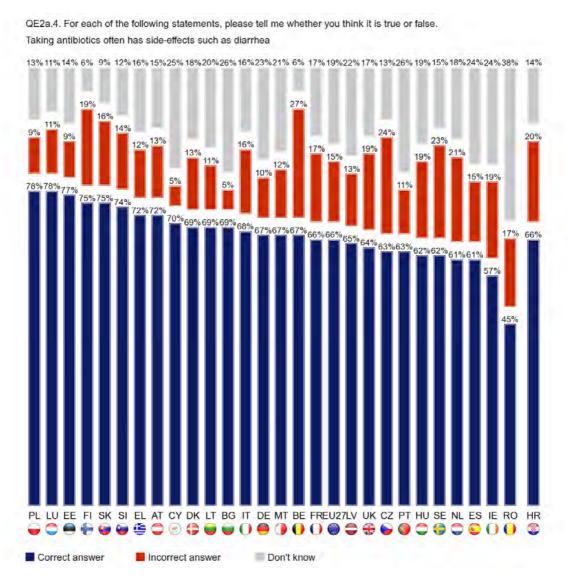
Correct answer = True
Base: all respondents (N= 26 680)

37

<sup>&</sup>lt;sup>20</sup> QE2a.4 For each of the following statements, please tell me whether you think it is true or false. Taking antibiotics often has side-effects such as diarrhea. ONE ANSWER ONLY. "True", "False", "Don't know".

In all but one Member State, more than half of respondents are correct. Interestingly, three of the five countries where at least three quarters (75%) of respondents answered correctly are NMS12 Member States, which runs against the aforementioned tendency for knowledge to be greater in northern European countries. Poland and Luxembourg (both 78%) have the highest proportion of correct answers, closely followed by Estonia (77%), Finland and Slovakia (both 75%). As in the previous question, Romania stands out for low levels of knowledge, with fewer than half of those polled (45%) giving the correct answer.

It should be noted that higher levels of correct answers are not correlated with lower levels of incorrect ones. There is substantial variation in the country-level proportions of those who give the wrong answer and those who are unable to give any answer. The proportion is a quarter or higher in four countries. Inability to answer the question is, again, a problem in Romania, where nearly two fifths (38%) of respondents cannot give an answer. At the other end of the scale, in Belgium and Finland, almost one in twenty (6% in each) of those polled cannot give an answer.



Correct answer = True Base: all respondents (N= 26 680) In contrast with the other sets of answers in this section, a majority of Member States have seen a decline in levels of knowledge since 2009. In Ireland, this decrease is particularly marked, with a decrease of 12 percentage points compared to 2009. Luxembourg has seen the biggest increase in correct answers, up 14 percentage points on 2009, with Hungary close behind with +12 percentage points. Central Europe stands out as the region which has seen most consistent improvement, while in most northern European states and all eastern European states the proportion of those answering correctly has declined. In southern Europe, the pattern is mixed.



2013 - 2009

Correct answer = True
Base: all respondents (N= 26 680)

Did not receive info

Fewer males (62%) than females (70%) agree that antibiotics often have side-effects. Those aged 15 to 24 (59%) are notably less likely than the average respondent (66%) to be aware of side-effects. Aside from this, the impact of **socio-demographic differences** is relatively minor.

As in the previous case, those who received information (73%) are more likely to give the correct answer than those who did not (62%). Media campaigns do not appear to have had an impact on knowledge as much as it was showed in the previous questions: those who got their information from this source (72%) are slightly less likely to answer the question correctly than those who received advice from a professional (75%), but still more likely than those who received no information (62%).

QE2a.4 For each of the following statements, please tell me whether you think it is true or false.

Taking antibiotics often has side-effects such as diarrhea

Correct answer Incorrect answer Don't know **EU27** 66% 15% 19% 14 Sex Male 62% 17% 21% Female 70% 14% 16% Age 15-24 59% 22% 19% 25-39 66% 18% 16% 40-54 67% 18% 15% 55 + 68% 13% 19% Received information Yes 73% 14% 13% Nο 62% 16% 22% Information sources on antibiotics 12% Advice from a professional 75% 13% Advice from family/friends 70% 14% 16% From media/campaigns 72% 13% 15%

Base: all respondents (N= 26 680)

16%

22%

62%

### Summary of socio-demographic analyses

Not all of the socio-demographic patterns identified above apply to every question. However, it is possible to identify certain tendencies.

- Women tend to be better informed than men.
- Respondents in the youngest cohort (15 to 24) tend to be less well informed than those in other age cohorts.
- Education has a strong influence, with those who left education at the age of 15 or younger significantly less well informed than those who remained in the education system for longer, particularly in comparison with those who stayed in education until or beyond the age of 20.
- Unsurprisingly, given the relationship between education and earning power, economic circumstances are also influential: those respondents who often have trouble paying bills are notably less likely to answer these questions correctly than those who do not have any such difficulties.
- Respondents who received information about the misuse of antibiotics are significantly more likely to give correct answers to these questions. It should be remembered that this correlation does not necessarily imply a causal link, and that education is likely to play a mediating role here. However, this finding supports the general principle that disseminating information about the prudent use of antibiotics is crucial to tackling widespread misconceptions about their nature and appropriate use.
- Where sources of information are concerned, media campaigns seem to be more effective than medical professionals at disseminating information about antibiotics. However, as the next section shows, those who get their information from medical professionals are more likely to be influenced to change their behaviour.

QE2a For each of the following statements, please tell me whether you think it is true or false.

% of 'Correct answer'

	Antibiotics kill viruses	Antibiotics are effective against cold and flu	Unnecessary use of antibiotics make them become ineffective	Taking antibiotics often has side-effects such as diarrhea
EU27	40%	52%	84%	66%
Sex				
Male	38%	48%	83%	62%
Female	41%	55%	85%	70%
Age				
15-24	37%	41%	82%	59%
25-39	39%	53%	85%	66%
40-54	44%	57%	85%	67%
55 +	38%	51%	83%	68%
Education (End of)				
15-	27%	41%	80%	65%
16-19	37%	51%	84%	66%
20+	52%	63%	89%	68%
Still studying	40%	44%	83%	61%
Difficulties paying bill	ls			
Most of the time	32%	45%	80%	65%
From time to time	35%	48%	80%	66%
Almost never	43%	55%	87%	67%
Received information	1			
Yes	52%	65%	91%	73%
No	34%	45%	80%	62%
Information sources	on antibiotics			
Advice from a professional	44%	58%	85%	75%
Advice from family/friends	46%	51%	89%	70%
From media/campaigns	55%	71%	94%	72%
Did not receive info	34%	45%	80%	62%

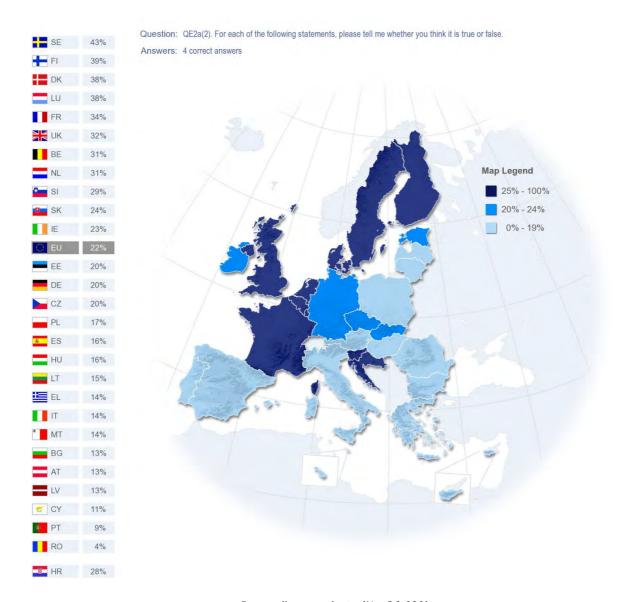
#### 5. OVERALL LEVELS OF KNOWLEDGE ON THE USE OF ANTIBIOTICS

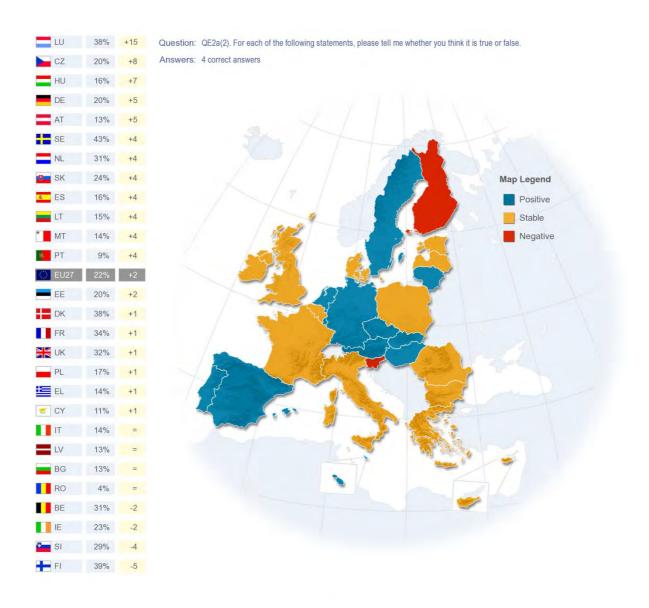
In none of the countries does a majority of those polled answer all four questions correctly. However, there are significant differences between individual countries and, in general, respondents in northern European countries perform better than those in other parts of Europe, although the divide is by no means a clear-cut one. In Sweden, over two fifths (43%) of respondents give correct answers to all the questions, followed by Finland (39%), Denmark (38%) and Luxembourg (38%). At the other extreme, less than one in twenty (4%) of those polled in Romania give correct answers to all the questions, and in Portugal just under one in ten (9%).

In all but four Member States, the proportion of those giving four correct answers has changed since 2009. In Luxembourg, the proportion of those giving correct answers to all the questions increased by 15 percentage points (pp), followed by 8pp in the Czech Republic and 7pp in Hungary. Elsewhere, changes in the proportion increased or decreased by no more than 5 percentage points. The biggest decrease was noted in Finland (5pp), followed by Slovenia (4pp). There is no correlation between overall levels of knowledge in 2009 and the degree of increase since then.

On average, only around a fifth (22%) of Europeans answer all four questions correctly. 94% give at least one correct answer, 32% give two correct answers, and 25% give three correct answers. The European average of correct answers is 2.4 out of 4. These figures are very similar to those obtained in 2009.

The average number of correct answers varies between Member States in a manner consistent with the pattern identified in the case of four correct answers. Sweden has the highest average at 3.1, followed by Denmark (3.0) and Luxembourg and Finland (2.9). The lowest averages are observed in Romania (1.5) and Portugal (1.9).





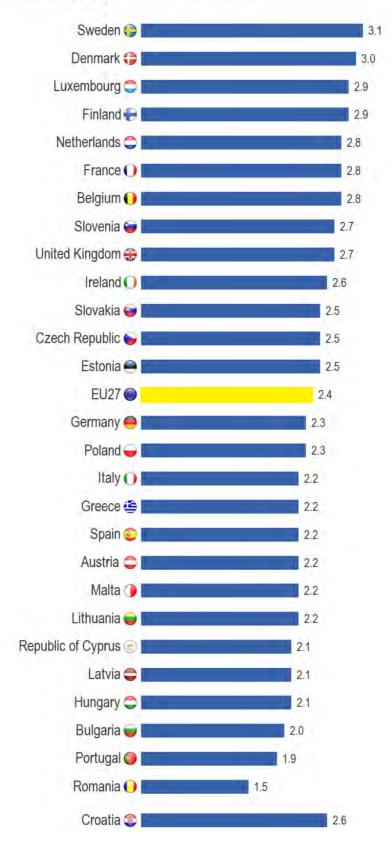
2013 - 2009

Base: all respondents (N= 26 680)

Question: QE2a(2). For each of the following statements, please tell me

whether you think it is true or false.

Answers: Average number of correct answers



The **socio-demographic profile** of those who give four correct answers is distinct in a number of ways:

- Overall knowledge of antibiotics is greater among women: a quarter (25%) give four correct answers, compared with under one fifth (19%) of men.
- Those aged between 15 and 24 are less likely than the average respondent to give four correct answers (16%, compared with the EU27 average of 22%).
- The higher the level of education, the more likely respondents are to give four correct answers. Almost a third (32%) of those who finished their education at the age of 20 or more answered all questions correctly, in comparison with a mere 14% of those who finished their education no later than the age of 15.
- There is also a relationship between economic status and levels of knowledge: a quarter of those who almost never have problems paying bills (25%) give four correct answers, compared with 16% of those who have trouble paying bills most of the time.

Those who say they have received information about antibiotics are significantly more likely to give four correct answers (32%, compared with 17% of those who did not receive information). Over a third (35%) of those who say they received information from media campaigns give four correct answers and a quarter (25%) of those who received information from professionals or from family and friends. In comparison, 17% of those who received no information gave four correct answers, a much lower proportion than the EU27 average of 22%.

QE2a For each of the following statements, please tell me whether you think it is true or false.

	4 correct answers				
EU27	22%				
Sex Sex					
Male	19%				
Female	25%				
Age					
15-24	16%				
25-39	21%				
40-54	26%				
55 +					
Education (End of)					
15-	14%				
16-19	21%				
20+	32%				
Still studying	18%				
Difficulties paying bil	ls				
Most of the time	16%				
From time to time	18%				
Almost never	25%				
Received information	n				
Yes	32%				
No	17%				
Information sources	on antibiotics				
Advice from a professional	25%				
Advice from family/friends	25%				
From media/campaigns	35%				
Did not receive info	17%				

### III. ANTIBIOTIC AWARENESS CAMPAIGNS

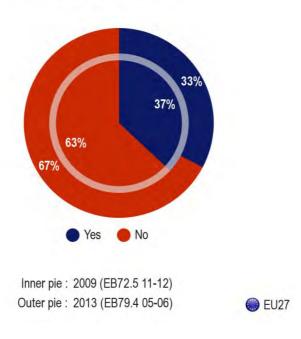
The third set of questions concerns the impact of antibiotic awareness campaigns. The answers to these questions enable us to analyse the reach of the campaigns, the most effective means of communication, and the extent to which these campaigns have had an impact.

#### 1. TAKING INFORMATION ON BOARD

#### -Antibiotic awareness campaigns only reach a third of Europeans-

Respondents were asked if they remembered receiving any information about the unnecessary use of antibiotics in the last 12 months.<sup>21</sup> Only a third (33%) of respondents say that they received such information. This is slightly lower than the figure recorded in 2009, when just over a third (37%) of those polled answered positively.

QE3a. In the last 12 months, do you remember getting any information about not taking any antibiotics unnecessarily, for example, messages about not taking antibiotics in case of cold or flu?

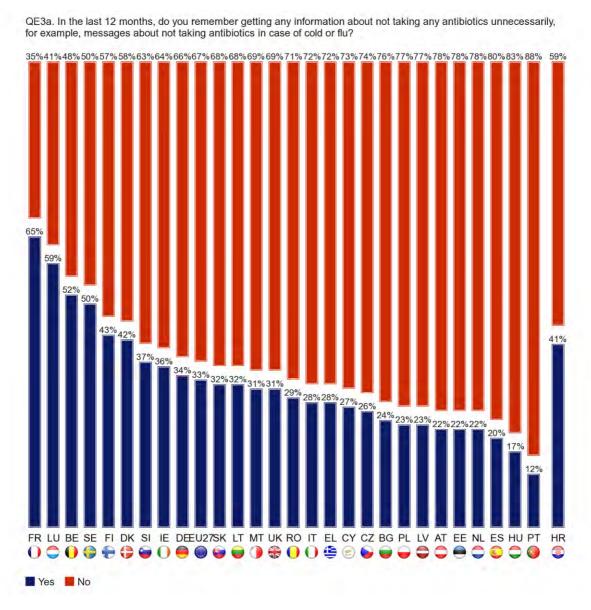


Base: all respondents (N= 26 680)

49

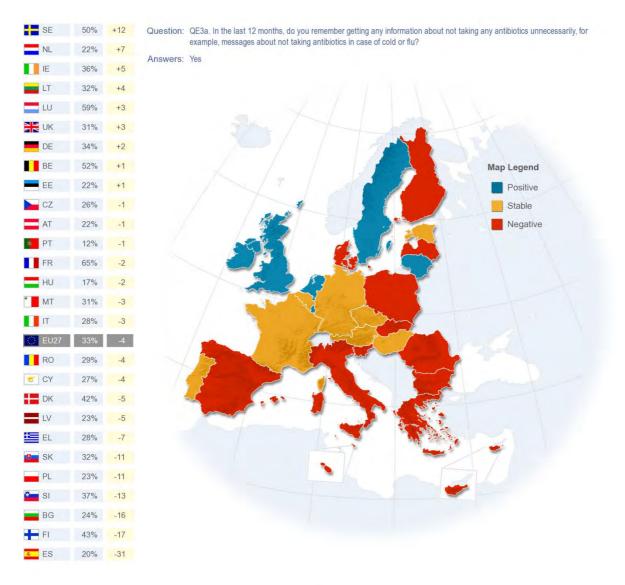
<sup>&</sup>lt;sup>21</sup> QE3a In the last 12 months, do you remember getting any information about not taking any antibiotics unnecessarily, for example, messages about not taking antibiotics in case of cold or flu? ONE ANSWER ONLY. "Yes", "No".

There are significant country-level differences on this question. In France, around two thirds (65%) of respondents recall receiving information about the unnecessary use of antibiotics, as do a majority of those polled in Luxembourg (59%) and Belgium (52%). In a majority of EU27 Member States – 18 in total – the proportion of those who received this information is lower than average. In Portugal, it is particularly low, at only just over one in ten (12%) of those polled. Low figures are also recorded in Hungary (17%) and Spain (20%).



Base: all respondents (N= 26 680)

Country-level changes since 2009 paint a largely discouraging picture. In nine Member States, the proportion of respondents who say they have received information about the unnecessary use of antibiotics has increased and, in Sweden, by as much as 12 percentage points. However, in the other 18 Member States, the proportion has declined, and, in six countries, the decrease is of more than 10 percentage points. The change in situation is particularly marked in the case of Spain, where the proportion has dropped by 31 percentage points.



2013 - 2009

The **socio-demographic breakdown** of the overall figures yields the following observations:

- Women (35%) are slightly more likely than men (31%) to have received information about antibiotics.
- Those aged between 15 and 24 (29%) are slightly less likely than the average respondent (33%) to have received this information.
- Education is again highly influential. Only a quarter (25%) of those who finished their education at or before the age of 15 say they received this information, compared with over two fifths (43%) of those who continued their education up to or beyond the age of 20.
- The internet is an important medium for the dissemination of this information. Nearly two fifths (38%) of those who use the internet daily say they have received information about the unnecessary use of antibiotics, compared with only a quarter (25%) of those who never use the internet.

Lastly, it is clear that the receipt of information about antibiotics is correlated with good levels of objective knowledge about them. Slightly less than half (49%) of those with good objective knowledge of antibiotics received this information, whereas under a fifth (17%) of those with poor levels of knowledge did. However, given the positive relationship of some socio-demographic variables – in particular education – with both of these variables, a causal relationship should not be assumed.

QE3a In the last 12 months, do you remember getting any information about not taking any antibiotics unnecessarily, for example, messages about not taking antibiotics in case of cold or flu?

	Yes	No
EU27	33%	67%
<b>№</b> Sex		
Male	31%	69%
Female	35%	65%
Age		
15-24	29%	71%
25-39	32%	68%
40-54	35%	65%
55 +	34%	66%
<b>Education</b> (E	nd of)	
15-	25%	75%
16-19	32%	68%
20+	43%	57%
Still studying	31%	69%
Use of the In	ternet	
Everyday	38%	62%
Often/ Sometimes	30%	70%
Never	25%	75%
Objective kn	owledge of antibiot	ics
Good	49%	51%
Average	33%	67%
Bad	17%	83%

#### 2. MEANS OF CONVEYING INFORMATION

# -A majority of informed Europeans receive information about antibiotics from media campaigns-

Those respondents who said they received information in the last 12 months about not taking antibiotics unnecessarily were asked to identify the source of this information. <sup>22</sup> To better understand the overall reach of various methods of conveying information, the following proportions are percentages of the entire sample, rather than the subset of only those who received information.

Almost a fifth (19%) of all respondents say they received information from media or communication campaigns, a decrease of one percentage point since 2009. The most common media source was television advertisements, cited by one in ten (10%) of respondents. A further 6% of respondents say they found out via newspapers or the television news.

More than one in ten (11%) of all respondents say they received information about antibiotics from a professional: a slight decrease from the figure of 14% recorded in 2009. In the majority of cases (9%, -2 percentage points), the professional in question was a doctor.

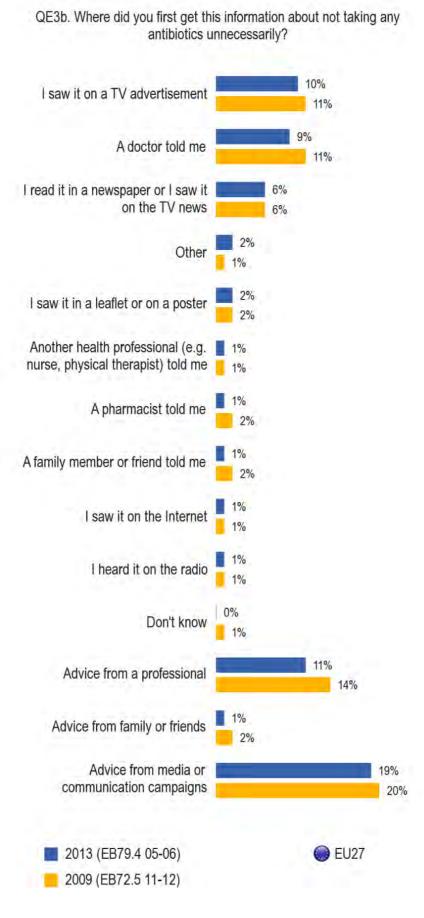
Only 1% of respondents say they got information from family or friends (-1).

<sup>&</sup>lt;sup>22</sup> QE3b Where did you first get this information about not taking any antibiotics unnecessarily? ONE ANSWER ONLY. "A doctor told me", "A pharmacist told me", "Another health professional (e.g. nurse, physical therapist) told me", "A family member or friend told me", "I saw it on a TV advertisement", "I saw it in a leaflet or on a poster", "I read it in a newspaper or I saw it on the TV news", "I heard it on the radio", "I saw it on the Internet", "Other", "Don't know".

The results for the answers "A doctor told me", "A pharmacist told me" and "Another health professional (e.g. nurse, physical therapist) told me" are regrouped into the answer "Advice from a professional".

The results for the answer "A family member or friend told me" are regrouped into the answer "Advice from family or friends".

The results for the answers "I saw it on a TV advertisement", "I saw it in a leaflet or on a poster", "I read it in a newspaper or I saw it on the TV news", "I heard it on the radio" and "I saw it on the Internet" are regrouped into the answer "Advice from media or communication campaigns".



There is substantial country-level variation with respect to sources of advice. The category 'Advice from family or friends' plays a minor role as, in most countries, only a small minority of respondents get information from these sources. The largest proportions are observed in Slovenia (5%) and Slovakia (4%). In all other countries, the proportion is 3% or lower and, in 12 Member States, only 1% of respondents get information from family and friends. None of the respondents in Spain got the information from such sources.

There are substantial differences between Member States with respect to media and communication campaigns. The most striking case is France, where half (52%) of all respondents say they received information from media campaigns. This can partly be accounted for by the fact that the proportion of respondents in France who received information is significantly higher than the average, but it is impressive nevertheless. High rates of media penetration are also found in Belgium (35%), Luxembourg (32%), Sweden (27%) and Denmark (24%). At the other extreme, only one in twenty (5%) respondents in Hungary and Portugal, and only 7% in Romania received information through this channel.

The largest changes since 2009 are noted in Bulgaria, where the proportion of those exposed to media campaigns has declined by 14 percentage points, and in Spain, where it has declined by 13 percentage points. Significant decreases are also found in Slovenia (-9 percentage points) and Poland (-8 percentage points). Increases are not of the same magnitude: the biggest increase is in the Netherlands (+7 percentage points), followed by Germany (+6 percentage points) and Lithuania (+5 percentage points).

Country variation in the case of advice from professionals is not as extreme, although there are still some substantial differences. Around a fifth of respondents in Luxembourg (22%), Romania (19%) and Italy (18%) get advice from professionals, with the proportion also being high in Slovakia (16%) and Finland (15%). The lowest proportions are found in the Netherlands (5%), Portugal (6%) and Spain (6%), where only around one in twenty of those polled receives advice from professionals.

In Spain, the proportion of those receiving advice from professionals has declined by 14 percentage points, reflecting the significant decline in the proportion of those who receive any kind of information in general. Significant decreases are also noted in Finland (-9 percentage points), Greece and Slovakia (-6 percentage points each). Again, increases are smaller in magnitude: in Luxembourg and Sweden, the proportion of those gaining advice from doctors has increased by 5 percentage points and, in Ireland, by 4 percentage points.

QE3b Where did you first get this information about not taking any antibiotics unnecessarily?

	Advice from media or communication campaigns		Advice from a	a professional	Advice from family or friends		
	EB79.4 2013	Diff. EB79.4 2013 - EB72.5 2009	EB79.4 2013	Diff. EB79.4 2013 - EB72.5 2009	EB79.4 2013	Diff. EB79.4 2013 EB72.5 2009	
EU27	19%	-1	11%	-3	1%	=	
BE	35%	=	13%	-1	2%	+1	
BG	9%	-14	11%	-4	3%	+2	
CZ	8%	-1	14%	=	3%	=	
DK	24%	+2	10%	-5	3%	=	
DE	21%	+6	9%	-3	1%	-1	
EE	10%	T#3	7%	+1	2%	=	
IE	20%	+2	14%	+4	1%	=	
EL	18%	=	9%	-6	1%	-1	
ES	13%	-13	6%	-14	0%	-2	
FR	52%	-3	10%	+2	1%	=	
IT	8%	-1	18%	-2	1%	=	
CY	15%	-2	9%	-1	1%	-2	
LV	11%	-5	8%	+1	2%	=	
LT	21%	+5	8%	=	3%	+1	
LU	32%	-4	22%	+5	3%	+1	
HU	5%	-1	11%	-1	1%	=	
MT	21%	-1	9%	=	1%	=	
AT	9%	+2	10%	-4	1%	=	
NL	14%	+7	5%	-1	1%	=	
PL	9%	-8	10%	-2	2%	-1	
PT	5%	+1	6%	-2	1%	=	
RO	7%	-2	19%	-2	2%	+1	
SI	15%	-9	14%	-5	5%	=	
SK	11%	-4	16%	-6	4%	=	
FI	21%	-6	15%	-9	3%	-2	
SE	27%	+3	13%	+5	3%	= -	
UK	18%	+3	9%	-1	1%	= 1	
HR	18%	*	19%	*	3%	*	

\*This question was not asked in Croatia in 2009

Where **socio-demographic factors** are concerned, there are not many substantial and statistically significant differences between particular cohorts of respondents who received information. The most noteworthy are listed below, and are based on the subset of those who say they received information, rather than the whole sample.

- Respondents aged between 15 and 24 years (50%) or between 25 and 39 years (53%) are less likely to have derived their information from media or communication campaigns than those aged between 40 and 54 years (59%) or 55 years or older (60%).
- Education is also positively associated with exposure to this message in the media: 61% of those educated up to or beyond the age of 20, compared with 54% who were not educated beyond the age of 15. Conversely, those in the least educated cohort are more likely to have received information from a professional, with over two fifths (41%) of this group citing this source, compared with just over a quarter (28%) of those with the highest level of education.
- Those who have most difficulty paying bills are more likely to have received advice from a professional (41%, compared with 29% of those who least often have difficulty paying bills).

As mentioned above, there is a positive relationship between levels of objective knowledge about antibiotics and the receipt of information about not taking them unnecessarily. Breaking this down by source of information, we can identify a positive relationship between levels of knowledge and exposure to media and communication campaigns. Of those who received information about antibiotics, nearly two thirds (62%) of those with good objective knowledge cite the media as their source, compared with fewer than half (45%) of those with poor knowledge. By contrast, only around a quarter (26%) of those with good knowledge gained advice from a professional, compared with over two fifths (44%) of those with poor knowledge.

QE3b Where did you first get this information about not taking any antibiotics unnecessarily?

	Advice from media or communication campaigns		Advice from family or friends		
EU27	56%	34%	4%		
Age Age					
15-24	50%	32%	9%		
25-39	53%	36%	4%		
40-54	59%	32%	3%		
55 +	60%	32%	3%		
education (	End of)				
15-	54%	41%	1%		
16-19	57%	34%	4%		
20+	61%	28%	4%		
Still studying	48%	31%	9%		
<u>-</u>	paying bills				
Most of the time	52%	41%	4%		
From time to time	51%	40%	5%		
Almost never	59%	29%	4%		
Objective k	nowledge of antibiotic	s			
Good	62%	26%	3%		
Average	56%	35%	4%		
Bad	45%	44%	6%		

Base: respondents who received information about not taking antibiotics unnecessarily (N=8803)

While there is clearly a stronger relationship between levels of knowledge about antibiotics and exposure to the media campaigns, there is evidence to suggest that doctors are more effective at getting people to think differently about antibiotics. Over a third (37%) of those who received information from a doctor say that it changed their views on antibiotics, compared with only under a quarter (23%) of those who received information from media campaigns. We now turn to a wider analysis of the role that information plays in changing the views of Europeans.

QE3b Where did you first get this information about not taking any antibiotics unnecessarily?

	I saw it on a TV advertisement	A doctor told me
EU27	29%	27%
Changed their view	s on antibiotics (info	o)
Yes	23%	37%
No	33%	20%

Base: respondents who received information about not taking antibiotics unnecessarily  $(N=8\ 803)$ 

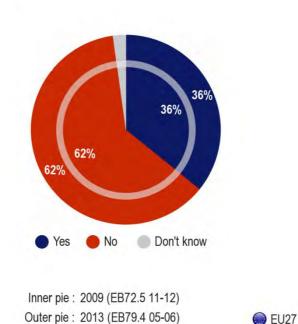
# 3. IMPACT OF THE ANTIBIOTIC AWARENESS CAMPAIGNS ON PERCEPTION AND BEHAVIOUR

### -More than a third of Europeans change their views after receiving information-

Those respondents who said they received information about antibiotics were asked whether they had changed their mind about antibiotics as a result of that information.<sup>23</sup> Only just over a third (36%) of those polled say that their views were changed by the information they received. This proportion remains unchanged since 2009.

When assessing the impact of the campaigns on the views of Europeans, we should not necessarily expect a majority of these respondents to have their views changed. Most of the respondents who declare they have received information about antibiotics already have some objective knowledge of these medicines (49%). Just over a fifth (22%) give correct answers to all four questions in section 2, and over half (57%) answer two or three questions correctly. Only one in ten (9%) of those who have received information about antibiotics give at most one correct answer.

QE3c. Did the information that you received change your views on antibiotics?



Base: respondents who received information about not taking antibiotics unnecessarily  $(N=8\ 803)$ 

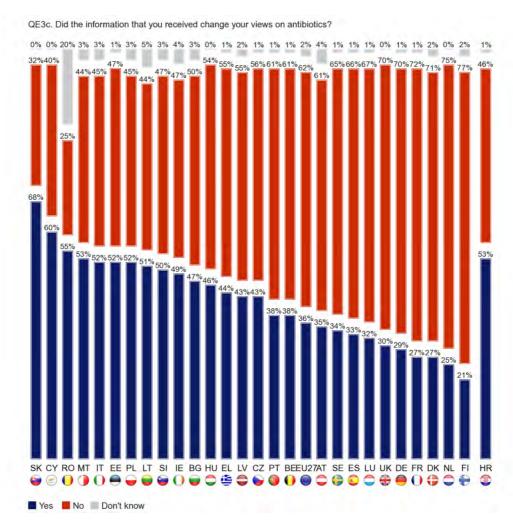
61

 $<sup>^{23}</sup>$  QE3c Did the information that you received change your views on antibiotics? ONE ANSWER ONLY. "Yes", "No", "Don't know".

Again, there are significant country-level differences on this question. In eight Member States and in Croatia, more than half of respondents say that the information they received changed their views and, in Slovakia, over two thirds (68%) do. However, in most countries, the proportion of those who changed their views is lower than 50%. In Finland, only around a fifth (21%) of respondents give this answer and, in the Netherlands, only a quarter (25%) do.

As noted in section 2 of this report, overall levels of knowledge about antibiotics are generally higher in countries of northern Europe than elsewhere. As the graph below shows, in the majority of these countries, a lower than average proportion of those polled say that their views were changed. By contrast, an above-average proportion of respondents in most southern European and NMS12 countries say their views were changed.

It is therefore likely that respondents in northern European countries did not change their views on antibiotics because the information that they received was in accordance with their existing knowledge. It is possible that respondents in these countries have reached a 'saturation point' with respect to their absorption of information about antibiotics: they use antibiotics less often, are more knowledgeable about them, and are thus less likely to report that they have been influenced by the information.

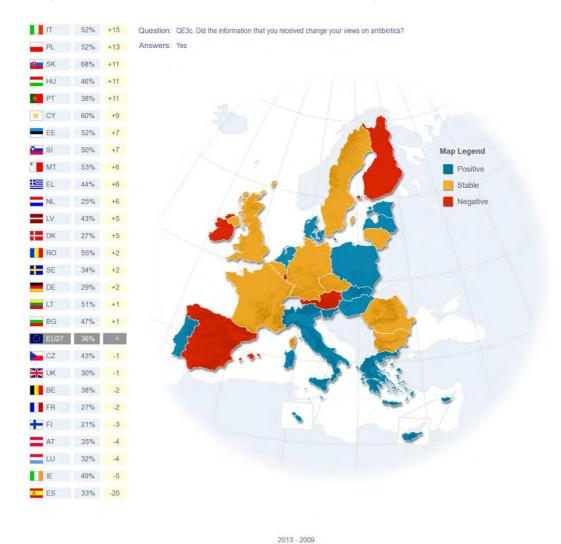


Base: respondents who received information about not taking antibiotics unnecessarily (N= 8 803)

The pattern of change observed since 2009 reinforces our previous observation that the information campaigns are more influential in those countries where existing levels of knowledge are lower than average. Of the five countries which have experienced a double-digit rise in the percentage of respondents who changed their views on antibiotics, only Slovakia has a higher than average proportion of respondents with good objective knowledge of antibiotics.<sup>24</sup>

Not all northern European countries experienced a decline in the proportion of respondents saying that their views had been changed, but the largest increase in these countries is the 6 percentage point increase in the Netherlands, compared with the 15 percentage point increase in Italy and the 13 percentage point increase in Poland.

However, the largest decrease is for Spain, where the proportion of those whose views have been changed has declined by 20 percentage points. This suggests we should nevertheless be careful not to assume too direct a link between low overall levels of knowledge and the likelihood that respondents will change their views.



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Base: respondents who received information about not taking antibiotics unnecessarily (N=  $8\,803$ )

-

<sup>&</sup>lt;sup>24</sup> The definition of 'good objective knowledge' used here is four correct answers to the questions about antibiotics discussed in section 2. See section 2 for the relevant country-level data.

The analysis of **socio-demographic differences** supports the general observation that those with lower levels of objective knowledge are more likely to have their views changed by the information they receive:

- Respondents in the 15-24 year and 25-39 year age cohorts (both 39%) are more likely to change their views than those in the 40-54 year and 55 years or above age cohorts (both 34%).
- Those who ended education at the age of 15 or earlier (39%) or those who are still studying (43%) are more likely to change their views than those who ended education at the age of 20 or later (32%).
- Those who have trouble paying their bills at least from time to time (43%) are more likely to change their views than those who almost never have trouble paying bills (33%).

Lastly, breaking down respondents by levels of objective knowledge confirms the overall observation: those with poor knowledge of antibiotics are more likely to have their views changed (41%, compared with 30% of those with a good level of knowledge). However, those who have had their views changed still remain in the minority regardless of their level of knowledge.

QE3c Did the information that you received change your views on antibiotics? Yes No Don't know EU27 62% 2% 36% Age 15-24 39% 59% 2% 25-39 39% 58% 3% 40-54 34% 64% 2% 55+ 34% 65% 1% **Education (End of)** 15-39% 59% 16-19 36% 62% 2% 20+ 32% 66% Still studying 43% 56% 1% Difficulties paying bills Most of the time 55% 3% 42% From time to time 43% 55% 2% 33% Almost never 66% 1% Objective knowledge of antibiotics Good 30% 69% 1% Average 38% 60% 2%

Base: respondents who received information about not taking antibiotics unnecessarily (N=8803)

56%

3%

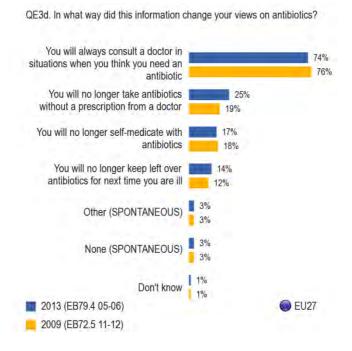
41%

Bad

Having established whose views were changed by the information received, we now turn to the question of *how* those views were changed. It should be noted that this involves drawing on a small subset of the overall survey sample. As a result, it is more difficult to draw conclusions about further subsets at the level of countries or socio-demographic categories, as they may be based on sample sizes which are too small to generate statistically significant results.

Those respondents who said they had changed their views on antibiotics as a result of the information they had received were asked to indicate how their behaviour would change as a result. The interviewer read out several options, from which respondents could choose as many as were relevant. <sup>25</sup>

Around three quarters (74%) of respondents whose views were changed by information on antibiotics say that as a result they will always consult a doctor about the need to take antibiotics. A quarter (25%) of respondents say they will no longer take antibiotics without a prescription from a doctor. This is a higher proportion compared to 2009, when less than two in 10 respondents (19%) reported they would be influenced in this way, showing therefore a positive impact of the information received. Just under a fifth (17%) say they will no longer self-medicate, while slightly fewer (14%) say they will no longer use left-over antibiotics. Very few respondents (3%) gave alternative answers.



Base: respondents whose views on antibiotics changed following information received about not taking antibiotics unnecessarily ( $N=3\ 163$ ) (MULTIPLE ANSWERS POSSIBLE)

-

<sup>&</sup>lt;sup>25</sup> QE3d In what way did this information change your views on antibiotics? MULTIPLE ANSWERS POSSIBLE. "You will always consult a doctor in situations when you think you need an antibiotic", "You will no longer self-medicate with antibiotics", "You will no longer take antibiotics without a prescription from a doctor", "You will no longer keep left over antibiotics for next time you are ill", "Other (SPONTANEOUS)", "None (SPONTANEOUS)", "Don't know".

Given the small sample sizes, many of the changes identified in the following table are not statistically significant. However, some are of sufficient magnitude to be worth of being mentioned.<sup>26</sup>

- In most cases, a large majority of respondents in almost all countries say they will consult a doctor to determine whether they need an antibiotic. The two exceptions are Finland (46%), where the proportion has declined by 29 percentage points since 2009, and the Netherlands (43%), where there is no statistically significant change. In Malta, the proportion of those who say they will consult a doctor has declined by 21 percentage points, but still a majority of respondents say they will (67%).
- There is greater country-level variance among those who say they will no longer take antibiotics without a doctor's prescription. In Denmark, over half of respondents (53%) give this answer, while in Portugal only one in ten (10%) does. The most significant changes are observed in Greece, where the proportion has increased by 24 percentage points, and in Austria, where it has increased by 21 percentage points. Other significant evolutions can be noticed in France (+15 percentage points) and Germany (+11), as well as in Cyprus (-13) and Bulgaria (-10).
- There is also a notable degree of variance on the question of whether respondents will continue to self-medicate with antibiotics. In Romania, over a third (35%) of respondents say that they will no longer self-medicate, closely followed by Lithuania and Slovenia (30%). However, in Portugal, only around one in twenty respondents (4%) makes this claim. The most significant changes since 2009 (a difference of 10 or more percentage points) have taken place in Lithuania (+12) and Finland (+11), as well as in Cyprus (-12), Bulgaria (-14) and Portugal (-18).
- The situation is similar when keeping left-over antibiotics is considered. A third of respondents in Denmark (32%) and Slovenia (31%) said that they will no longer do this, compared with only 3% of respondents in Italy. Increases of more than 10 percentage points are noticed in Greece (+15), Hungary (+12), Austria (+11) and Ireland (+11).

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<sup>&</sup>lt;sup>26</sup> Results for Bulgaria (N=115), Czech Republic (N=114), Denmark (N=113), Germany (N=148), Estonia (N=115), Greece (N=122), Spain (N=68), Italy (N=148), Cyprus (N=82), Latvia (N=98), Luxembourg (N=95), Hungary (N=78), Malta (N=82), the Netherlands (N=56), Austria (N=81), Poland (N=120), Portugal (N=47), Finland (N=91) and the United Kingdom (N=123) should be considered as indicative due to low sample size.

QE3d In what way did this information change your views on antibiotics?

		You will always consult a doctor in situations when you think you need an antibiotic			nger take antibiotics cription from a doctor		ger self-medicate with ntibiotics		onger keep left over r next time you are ill
		2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)
	EU27	74%	-2	25%	+6	17%	-1	14%	+2
	CZ	88%	+7	14%	-5	14%	-6	14%	-7
Ŏ	IT	85%	+6	17%	+1	12%	+3	3%	+1
	PT	71%	+5	10%	+2	4%	-18	8%	+2
	LV	53%	+4	21%	-5	22%	-8	14%	=
	DK	70%	+3	53%	-3	28%	+1	32%	+5
	PL	76%	+3	18%	+1	14%	-1	6%	+3
	SI	79%	+2	38%	+7	30%	+8	31%	-1
	EL	87%	+1	37%	+24	13%	+6	21%	+15
	LT	58%	+1	33%	+1	30%	+12	10%	+2
	NL	43%	+1	27%	-8	12%	+6	9%	+1
	DE	72%	=	34%	+11	18%	=	16%	-4
	AT	78%	=	38%	+21	16%	-2	29%	+11
	RO	84%	=	29%	-6	35%	-4	23%	+6
	CY	89%	-1	28%	-13	11%	-12	14%	-7
	BE	79%	-2	26%	+6	22%	+4	17%	+5
	SK	77%	-2	15%	-2	18%	+5	11%	-2
4 D	UK	63%	-2	22%	=	12%	+5	10%	-5
<b>8</b>	ES	80%	-3	12%	=	13%	-10	9%	+2
0	FR	66%	-4	30%	+15	18%	-2	20%	+4
	EE	64%	-5	33%	-7	12%	-3	11%	-7
	LU	74%	-5	31%	-2	19%	=	17%	-8
	BG	78%	-6	15%	-10	20%	-14	5%	-8
$\mathbf{O}$	IE	71%	-6	23%	+8	14%	+5	22%	+11
	HU	72%	-7	25%	+2	10%	+4	18%	+12
	SE	65%	-8	33%	-2	13%	-5	20%	=
	MT	67%	-21	34%	-1	21%	+3	16%	=
$\bigoplus$	FI	46%	-29	15%	+7	16%	+11	12%	+3
	HR	85%	*	19%	*	16%	*	17%	*

\*This question was not asked in Croatia in 2009

Base: respondents whose views on antibiotics changed following information received about not taking antibiotics unnecessarily (N= 3 163)

(MULTIPLE ANSWERS POSSIBLE)

There are few statistically significant **socio-demographic findings** on this question. Respondents with low levels of objective knowledge about antibiotics are more likely to say that as a result of the information they received, they will consult a doctor about the use of antibiotics in future (82%, compared with 69% of those who have good knowledge). A similar difference is observed in the case of the sources of information consulted by respondents: 80% of those who received advice on antibiotics from a professional say that they will consult a doctor in future, compared with 69% of those who received information via media campaigns. This shows that while media campaigns convey the message to a larger number of Europeans than the medical profession does, those reached by the campaigns are more likely to be already acting in accordance with best practice.

QE3d In what way did this information change your views on antibiotics?

	You will always consult a doctor in situations when you think you need an antibiotic	without a	You will no longer self-medicate with antibiotics	You will no longer keep left over antibiotics for next time you are ill	Other (SPONTANEOUS)	None (SPONTANEOUS)	Don't know
EU27	74%	25%	17%	14%	3%	3%	1%
Objective knowledge of antibiotics							
Good	69%	26%	16%	16%	6%	5%	1%
Average	74%	24%	17%	13%	3%	3%	1%
Bad	82%	27%	17%	10%	1%	1%	1%
Information sources	on antibiotics						
Advice from a professional	80%	22%	16%	12%	2%	2%	0%
Advice from family/friends	64%	32%	23%	15%	8%	4%	0%
From media/campaigns	69%	27%	16%	15%	3%	4%	1%

Base: respondents whose views on antibiotics changed following information received about not taking antibiotics unnecessarily (N= 3 163)

(MULTIPLE ANSWERS POSSIBLE)

#### 4. THE MOST TRUSTWORTHY SOURCES OF INFORMATION

# -The vast majority of respondents see doctors as a trustworthy source of information on antibiotics-

Respondents were asked to give their opinion on which sources of information about antibiotics are the most trustworthy. The interviewer showed the respondent a card with a number of options, from which the respondent could select a maximum of three.<sup>27</sup>

As in 2009, almost all (94%) respondents see medical professionals or health care facilities as the most trustworthy sources of information. Just under nine in ten (88%) respondents identify doctors as important sources of information, while just under half (47%) say that pharmacies are. Few respondents opt for non-health-related sources such as family and friends or newspapers and magazines: in total, only 7% see these as important. Lastly, 16% of those polled see health-related internet sites as good sources of information.

69

<sup>&</sup>lt;sup>27</sup> QE4 Which of the following sources of information would you use in order to get trustworthy information on antibiotics? MAXIMUM 3 ANSWERS. "A doctor", "A nurse", "A pharmacy", "A hospital", "Another health care facility", "Family or friends", "The Internet site from the National Government\the Ministry of Health", "The Internet site from the (NATIONAL PUBLIC HEALTH INSTITUTE – USE APPROPRIATE NAMING IN EACH COUNTRY)", "The Internet site on Public Health from the European Union", "Another health related Internet site", "A Health Medical Encyclopedia", "A national, independent public health body or organisation", "A newspaper or magazine", "A health related magazine", "Other (SPONTANEOUS)", "I am not looking for information on antibiotics (SPONTANEOUS)", "Don't know"

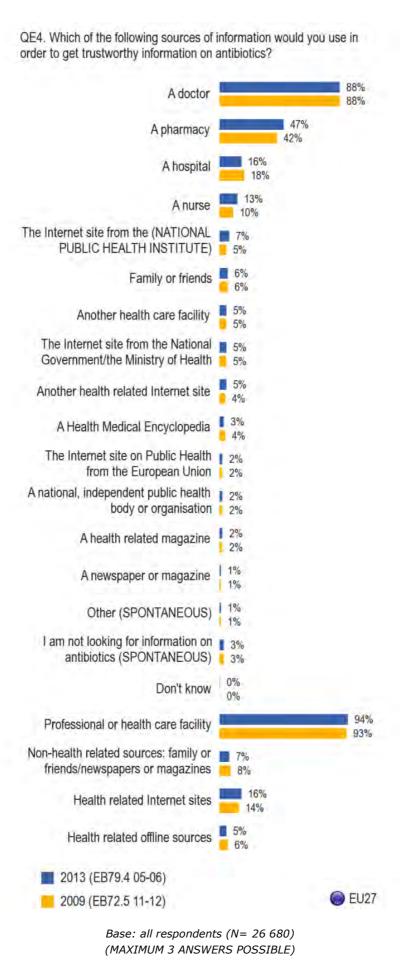
information on antibiotics (SPONTANEOUS)", "Don't know".

The results for the answers "A doctor", "A nurse", "A pharmacy", "A hospital", "Another health care facility" and "A national, independent public health body or organisation" are regrouped into the answer "Professional or health care facility".

The results for the answers "Family or friends" and "A newspaper or magazine" are regrouped into the answer "Non-health related sources: family or friends / newspapers or magazines".

The results for the answers "The Internet site from the National Government\the Ministry of Health", "The Internet site from the (NATIONAL PUBLIC HEALTH INSTITUTE – USE APPROPRIATE NAMING IN EACH COUNTRY)", "The Internet site on Public Health from the European Union" and "Another health related Internet site" are regrouped into the answer "Health related Internet site".

The results for the answers "A Health Medical Encyclopedia" and "A health related magazine" are regrouped into the answer "Health related offline source".



70

In all countries, a large majority of respondents see doctors as a source of trustworthy information on antibiotics. However, in two countries, the proportion is noticeably lower than the average: in Sweden (76%) and Finland (78%) only just over three quarters of respondents hold this view. Changes since 2009 are of less than 10 percentage points; the largest increase being in Poland (+7 percentage points), and the largest decrease in the Czech Republic (-6 percentage points).

There is more variation in the case of attitudes to pharmacies as sources of reliable information. Around two thirds of respondents in the Netherlands (66%), Austria (64%) and Finland (63%) said that pharmacies are trustworthy sources, while only a third held this view in Italy (30%), Spain (32%) and Poland (33%). More people than in 2009 would use pharmacies as a trustworthy source of information in all but three countries (Sweden, Lithuania and Ireland). This is especially the case in Malta, Luxembourg, Belgium, Greece, Finland and Slovenia (an increase of more than +10 percentage points).

As for hospitals being a source of trustworthy information, proportions are distinctly higher than average in three Member States. In Greece, around one third (34%) of respondents identify hospitals as sources of trustworthy information, as do over a quarter in Cyprus (28%) and Malta (26%). However, this tendency does not hold across all southern European countries: in Spain (13%, down by 13 percentage points since 2009) and Italy (15%) the figure is lower than the EU27 average of 16%. The lowest figures are found in Germany (8%) and Estonia (9%), where under one in ten respondents gives this answer.

Lastly, there is also substantial variation between countries where nurses are concerned. In Sweden, a third (33%) of respondents saw nurses as sources of trustworthy information, as do over a quarter of respondents in Romania (29%, +19 percentage points) and Finland (28%). However, this opinion is shared by a mere 2% of those polled in Lithuania, 3% of respondents in Greece, and 5% in Germany. Significant evolutions compared to 2009 have also taken place in Portugal (+10) and Ireland (-10).

QE4 Which of the following sources of information would you use in order to get trustworthy information on antibiotics?\*

		A doctor		A	pharmacy	А	hospital		A nurse
		2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)	2013 (EB79.4 05-06)	Diff. 2013 (EB79.4 05-06) - 2009 (EB72.5 11-12)
	EU27	88%	=	47%	+5	16%	-2	13%	+3
	PL	84%	+7	33%	+4	10%	=	9%	-2
Ŏ	BE	93%	+5	58%	+11	24%	+1	10%	+4
Ŏ	FR	91%	+3	56%	+8	22%	+4	11%	+2
	RO	93%	+3	54%	+7	22%	+2	29%	+19
<b>(</b>	SI	87%	+2	60%	+10	11%	=	18%	+7
Ŏ	DK	88%	+1	58%	+6	20%	=	14%	+4
	EE	85%	+1	50%	+9	9%	-4	18%	+6
<b>(a)</b>	EL	91%	+1	41%	+11	34%	+5	3%	-5
	SE	76%	+1	56%	-3	21%	-1	33%	+5
	DE	91%	=	55%	+7	8%	=	5%	-1
	PT	90%	=	38%	+9	18%	-9	17%	+10
$\overline{\mathfrak{S}}$	CY	95%	-1	42%	+9	28%	-8	11%	+2
	LV	82%	-1	37%	+9	17%	+7	11%	+6
	NL	82%	-1	66%	+5	20%	-3	9%	+4
	MT	93%	-2	39%	+13	26%	+6	9%	+6
<b>&amp;</b>	ES	90%	-3	32%	+4	13%	-13	11%	+4
0	IT	86%	-3	30%	+5	15%	-2	8%	+4
	LT	81%	-3	44%	-4	12%	+1	2%	=
	AT	90%	-3	64%	+7	20%	-5	13%	+4
$\bigoplus$	FI	78%	-3	63%	+10	14%	+1	28%	+2
	BG	84%	-4	47%	+7	16%	-5	15%	+4
	LU	91%	-4	50%	+12	19%	+3	11%	+3
4 D	UK	86%	-4	51%	+4	19%	-5	22%	+5
	IE	84%	-5	54%	-8	14%	-7	21%	-10
	HU	83%	-5	54%	+8	15%	-1	12%	=
	SK	86%	-5	58%	+8	15%	+3	22%	+3
	CZ	89%	-6	48%	+1	21%	+1	16%	-1
	HR	93%	**	38%	**	14%	**	17%	**

\*\*This question was not asked in Croatia in 2009

\*Only the answers mentioned by at least 1 in 10 respondents are shown

Base: all respondents (N= 26 680) (MAXIMUM 3 ANSWERS POSSIBLE) There are a few noteworthy **socio-demographic differences**, most of which relate to attitudes towards the internet as a source of information on antibiotics.

- Respondents aged 55 years or older (10%) are half as likely as other groups to see health-related internet sites as potential sources of trustworthy information.
- Less than one in ten (7%) of those who finished education at the age of 15 or earlier has a positive view of internet sites, compared with a quarter (24%) of those who finished education at the age of 20 or later.
- Economic status is also clearly relevant: one in ten of those who have trouble paying bills (11%) see health-related internet sites as sources of trustworthy information, whereas around a fifth of those who never have trouble paying bills (18%) hold this view.
- Those with greater objective knowledge about antibiotics are also more likely to trust these sites (24%, compared with 10% of those with poor knowledge).

QE4 Which of the following sources of information would you use in order to get trustworthy information on antibiotics?

	Professional or health care facility	Health related Internet sites	Non-health related sources	Health related offline sources
EU27	94%	16%	7%	5%
Age				
15-24	94%	20%	10%	7%
25-39	94%	19%	7%	5%
40-54	94%	19%	6%	5%
55 +	95%	10%	6%	5%
Education (End of)				
15-	96%	7%	5%	3%
16-19	94%	15%	7%	6%
20+	93%	24%	7%	6%
Still studying	93%	20%	10%	8%
Difficulties paying bills				
Most of the time	94%	11%	7%	4%
From time to time	95%	14%	7%	5%
Almost never	94%	18%	7%	6%
Objective knowledge of an	tibiotics			
Good	93%	24%	7%	8%
Average	95%	15%	7%	5%
Bad	94%	10%	7%	4%

Base: all respondents (N= 26 680) (MAXIMUM 3 ANSWERS POSSIBLE)

The following analysis will look at the same socio-demographic indicators used above, but will detail more specifically each item that falls within the 'professional or health care facilities' category (medical doctors, pharmacies, hospitals, nurses and other health care facilities).

There are no notable socio-demographic differences by age, education, difficulties to pay bills or levels of objective knowledge about antibiotics when looking at the specific items. Respondents across these demographic groups are equally likely to consider doctors as the most trustworthy information source on antibiotics (ranging between 86%-89% across all socio-demographic types compared to 88% at the EU level), with pharmacies coming in second place (ranging between 43% - 50% compared to 47% at the EU level).

QE4 Which of the following sources of information would you use in order to get trustworthy information on antibiotics? (MAX. 3 ANSWERS)

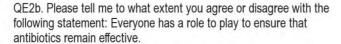
	A doctor	A pharmacy	A hospital	A nurse	Another health care facility
EU27	88%	47%	16%	13%	5%
Age					
15-24	88%	48%	18%	15%	4%
25-39	87%	45%	15%	13%	4%
40-54	87%	48%	15%	12%	5%
55 +	89%	47%	17%	12%	5%
Education (End of)					
15-	90%	44%	16%	13%	5%
16-19	89%	49%	17%	12%	5%
20+	86%	47%	15%	12%	4%
Still studying	87%	48%	16%	13%	4%
Difficulties paying bills					
Most of the time	87%	44%	19%	14%	5%
From time to time	88%	46%	17%	14%	5%
Almost never	88%	48%	16%	12%	4%
Objective knowledge of antib	iotics				
Good	86%	50%	15%	13%	4%
Average	89%	47%	17%	12%	5%
Bad	88%	43%	16%	13%	4%

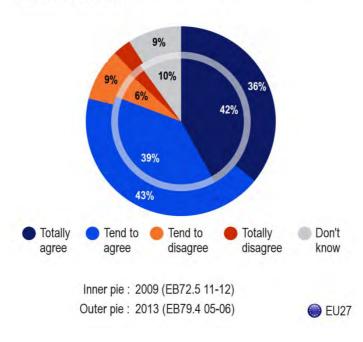
Base: all respondents (N= 26 680) (MAXIMUM 3 ANSWERS POSSIBLE)

# 5. INDIVIDUAL RESPONSIBILITY IN PRESERVING THE EFFECTIVENESS OF ANTIBIOTICS

# -Nearly eight out of ten respondents agree to some extent that everyone has a role to play in preserving the effectiveness of antibiotics-

Respondents were asked to what extent they agree or disagree with the opinion that everyone has a role to play in ensuring that antibiotics remain effective. <sup>28</sup> Nearly eight out of ten (79%) respondents agree to a certain extent with this statement. However, since 2009, the proportion of respondents **who 'totally agree'** has declined from just over two fifths (42%) to just over one third (36%).



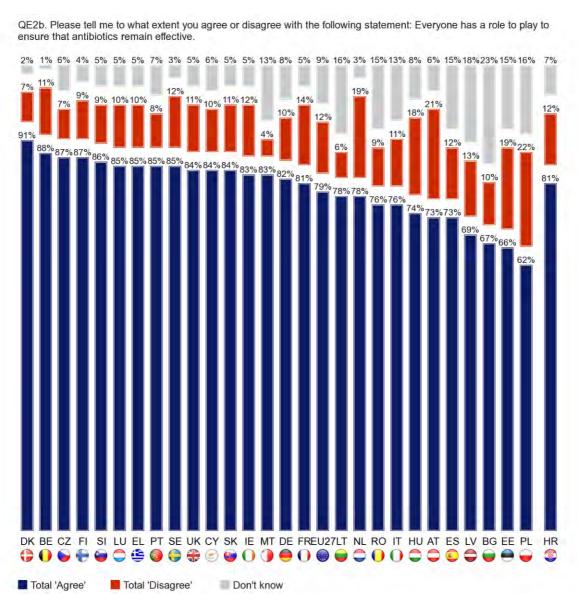


Base: all respondents (N= 26 680)

75

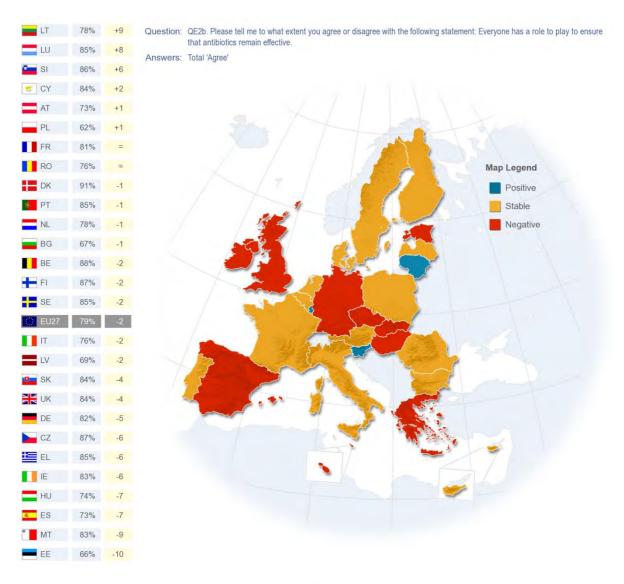
<sup>&</sup>lt;sup>28</sup> QE2b Please tell me to what extent you agree or disagree with the following statement: Everyone has a role to play to ensure that antibiotics remain effective. ONE ANSWER ONLY. "Totally agree", "Tend to agree", "Tend to disagree", "Totally disagree", "Don't know".

In all countries, a majority of respondents agree to some extent with the notion that everybody has a role to play in preserving the effectiveness of antibiotics. However, there is some variation between Member States on this question. In Denmark, more than nine in ten (91%) respondents agree, closely followed by Belgium (88%) and the Czech Republic and Finland (both 87%). In 16 Member States and in Croatia, at least four fifths (80%) of respondents agree with the statement. The remaining 11 Member States are below the EU27 average of 79%, with levels of agreement distinctly lower than average in Poland (62%), Estonia (66%), Bulgaria (67%) and Latvia (69%).



Base: all respondents (N= 26 680)

In most Member States, the proportion of respondents who agree that 'everybody has a role to play' has declined. In eight countries, the proportion has dropped by at least 5 percentage points. The decline is particularly visible in Estonia (-10 percentage points) and Malta (-9 percentage points). In France and Romania no change has taken place. In six countries, the proportion of those who agree has increased, with the change particularly significant in Lithuania (+9 percentage points), Luxembourg (+8 percentage points) and Slovenia (+6 percentage points). There is no clear geographical pattern to these changes.



2013 - 2009

Base: all respondents (N= 26 680)

At the aggregate level of agree/disagree, there are few significant **differences between socio-economic groups**. We therefore focus on differences with respect to the answer **'totally agree'**, where just over a third (36%) of all respondents hold this view.

- Those aged between 15 and 24 years (30%) are less likely to be in total agreement that everybody has a role to play in maintaining the effectiveness of antibiotics.
- Respondents who left education at the age of 20 or later (42%) are more likely to agree totally with the statement than other educational cohorts.
- Those with fewer difficulties paying bills are slightly more likely to agree with the statement. 39 percent of those who never have trouble paying bills 'totally agree', compared with 33% of those who very often have trouble paying bills.

Objective knowledge of antibiotics is strongly correlated with the likelihood that a respondent is in complete agreement. Almost half (49%) of those with good objective knowledge totally agree with the statement, compared with only a quarter (24%) of those with poor knowledge of antibiotics. A similar distinction can be found between those who received information about antibiotics (49%) and those who did not (29%).

QE2b Please tell me to what extent you agree or disagree with the following statement: Everyone has a role to play to ensure that antibiotics remain effective.

	Totally agree	Tend to agree	Tend to disagree	Totally disagree	Don't know
EU27	36%	43%	9%	3%	9%
Age					
15-24	30%	47%	10%	4%	9%
25-39	34%	44%	10%	4%	8%
40-54	38%	41%	9%	4%	8%
55 +	38%	42%	8%	2%	10%
<b>Education</b> (I	End of)				
15-	33%	42%	8%	3%	14%
16-19	34%	45%	9%	4%	8%
20+	42%	40%	9%	3%	6%
Still studying	32%	44%	11%	4%	9%
<u>-</u> ∮ Difficulties <sub>l</sub>	paying bills				
Most of the time	33%	41%	11%	4%	11%
From time to time	30%	48%	9%	3%	10%
Almost never	39%	41%	9%	3%	8%
Objective ki	nowledge of antibio	tics			
Good	49%	37%	8%	3%	3%
Average	35%	45%	9%	4%	7%
Bad	24%	43%	9%	4%	20%
Received in	formation				
Yes	49%	38%	7%	2%	4%
No	29%	46%	10%	4%	11%

Base: all respondents (N= 26 680)

#### **CONCLUSIONS**

This study of the attitudes, knowledge and behaviour of Europeans concerning the use of antibiotics shows persistent wide differences between countries and between different socio-demographic groups. Nevertheless, the following broad conclusions can be drawn about the effectiveness of antibiotic awareness campaigns in Europe in the wider context of how Europeans obtain medical knowledge: firstly, media campaigns are efficient as sources of information and need to be targeted more effectively. Secondly, doctors and pharmacies are trusted sources of information and considered as being influential authorities who have an important role to play in correcting views and behaviours regarding the appropriate use of antibiotics.

There has been a significant decline in the use of antibiotics among Europeans, with the proportion of respondents who have taken antibiotics during the last 12 months decreasing from two fifths (40%) in 2009 to just over a third (35%) in 2013. Country-group differences are less substantial than in 2009, when southern European countries stood out with a higher rate of antibiotic use. Both Italy and Spain have seen a substantial decline in the proportion of respondents using antibiotics in general.<sup>29</sup>

The overwhelming majority of respondents obtain antibiotics from their health care provider, but there remains a persistent minority (3% of those taking antibiotics) who use antibiotics without prescription, contrary to the legal requirement that all antibiotics in the EU be dispensed on prescription only. This is particularly high in Romania (18%), Greece (15%) and Cyprus (10%).

Overall knowledge of antibiotics remains rather low: as in 2009, only less than a fifth (22%) of Europeans are able to give the correct answer to four questions on this topic, although there are considerable country variations. In Luxembourg, the proportion of those giving correct answers to all the questions increased by 15 percentage points (pp), followed by 8pp in the Czech Republic and 7pp in Hungary. Although the vast majority (84%) are aware that overuse of antibiotics makes them ineffective, this simply illustrates the problem confronting those who are trying to persuade Europeans to change their habits for the better: persistently low levels of knowledge about what antibiotics are for are reflected in a widespread misuse of these medicines. Half (49%) of Europeans erroneously believe that antibiotics can be used to treat viruses, while two fifths (41%) make the same mistake regarding colds and flu. Indeed, flu remains one of the most commonly cited reasons for taking antibiotics, with nearly a fifth (18%) of respondents doing so. However, the proportion who responded correctly has increased for both these two questions.

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<sup>&</sup>lt;sup>29</sup> The question on whether or not the economic crisis has influenced behaviour as to antibiotic use is not within the remit of this report to analyse, however, it should be highlighted that it cannot be excluded.

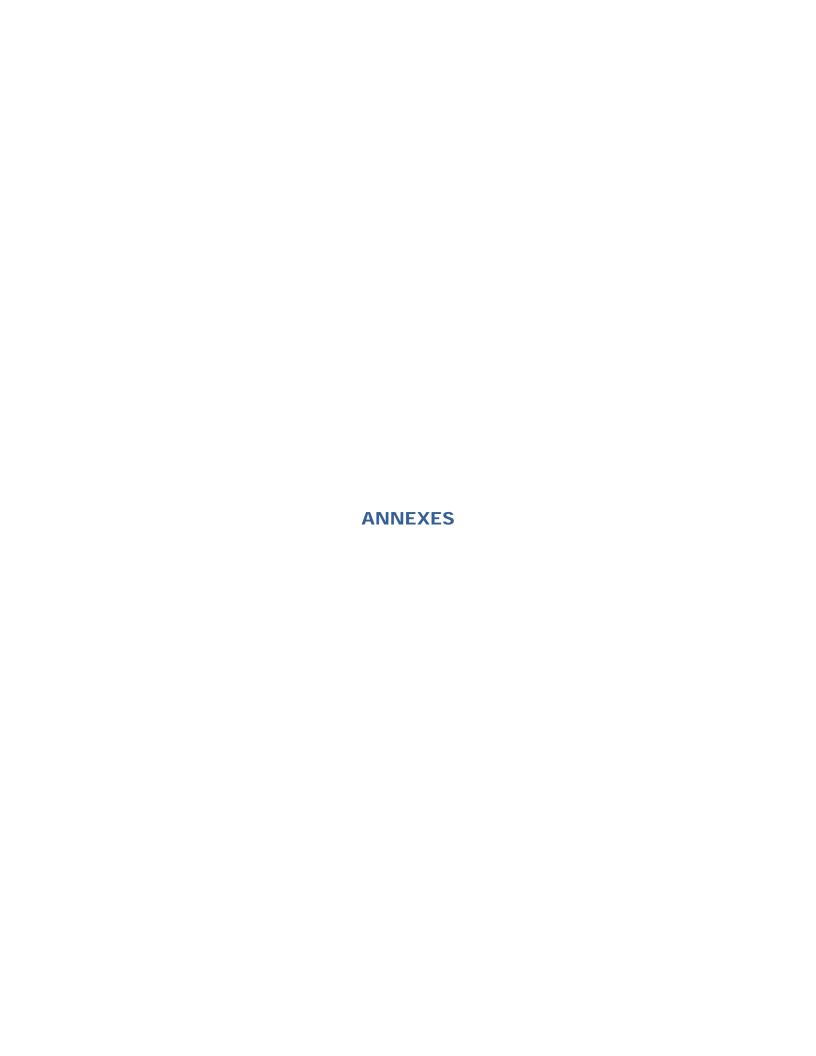
It appears that the media and communications campaigns have been successful in raising awareness, albeit rather unevenly across the Member States. Those who have been exposed to information of any kind are generally more likely to have better knowledge about antibiotics than those who have not been, but those who received information from media campaigns are more likely to be better informed than those who received advice from medical professionals.

The picture is more mixed when it comes to the impact these campaigns have had on actual behaviour. As in 2009, only just over a third (36%) of those Europeans who have received information say that the information they received – from whichever source – has led them to reconsider their use of antibiotics, and there are wide variations between Member States.

Nevertheless, there are signs that media campaigns could have more substantial effects if targeted more effectively. At present, it seems the campaigns reach more of those Europeans who are in any case more likely to act responsibly anyway. Those with lower levels of objective knowledge about antibiotics and those in socio-demographic cohorts associated with greater use of antibiotics - respondents with low levels of education, those in difficult economic circumstances, and students – are more likely to have their views changed by the information they receive.

On current evidence, the on-going campaigns to improve Europeans' knowledge about and the appropriate use of antibiotics could benefit from being targeted more clearly at those countries and socio-demographic groups whose knowledge about and use of antibiotics still leaves much to be desired. As the findings in section 3 suggest, use of the more traditional sources of information dissemination such as broadcast (TV or radio) and print media should be used.

However, the strategy to raise awareness of antibiotics among low-knowledge groups cannot rely only on better targeting the media campaigns. It also needs to involve the medical professionals and pharmacies which, as this report shows, have a significant role to play. While the media is efficient at conveying information, doctors and pharmacists are most likely to be able to influence the people who are less well-informed about antibiotics in order to correct their way of using these medicines.





#### SPECIAL EUROBAROMETER 407

### Antimicrobial resistance

### **TECHNICAL SPECIFICATIONS**

Between the 24 May and 9 June 2013, TNS opinion & social, a consortium created between TNS plc and TNS opinion, carried out the wave 79.4 of the EUROBAROMETER survey, on request of the EUROPEAN COMMISSION, Directorate-General for Communication, "Research and Speechwriting".

The SPECIAL EUROBAROMETER 407 survey is part of wave 79.4 and covers the population of the respective nationalities of the European Union Member States, resident in each of the Member States and aged 15 years and over

The SPECIAL EUROBAROMETER 407 survey has also been conducted in Croatia where the survey covers the national population of citizens and the population of citizens of all the European Union Member States that are residents in this country and have a sufficient command of the national languages to answer the questionnaire.

The basic sample design applied in all states is a multi-stage, random (probability) one. In each country, a number of sampling points was drawn with probability proportional to population size (for a total coverage of the country) and to population density.

In order to do so, the sampling points were drawn systematically from each of the "administrative regional units", after stratification by individual unit and type of area. They thus represent the whole territory of the countries surveyed according to the EUROSTAT NUTS II (or equivalent) and according to the distribution of the resident population of the respective nationalities in terms of metropolitan, urban and rural areas. In each of the selected sampling points, a starting address was drawn, at random. Further addresses (every Nth address) were selected by standard "random route" procedures, from the initial address. In each household, the respondent was drawn, at random (following the "closest birthday rule"). All interviews were conducted face-to-face in people's homes and in the appropriate national language. As far as the data capture is concerned, CAPI (*Computer Assisted Personal Interview*) was used in those countries where this technique was available.

For each country a comparison between the sample and the universe was carried out. The Universe description was derived from Eurostat population data or from national statistics offices. For all countries surveyed, a national weighting procedure, using marginal and intercellular weighting, was carried out based on this Universe description. In all countries, gender, age, region and size of locality were introduced in the iteration procedure. For international weighting (i.e. EU averages), TNS Opinion & Social applies the official population figures as provided by EUROSTAT or national statistic offices. The total population figures for input in this post-weighting procedure are listed below.

Readers are reminded that survey results are <u>estimations</u>, the accuracy of which, everything being equal, rests upon the sample size and upon the observed percentage. With samples of about 1,000 interviews, the real percentages vary within the following confidence limits:

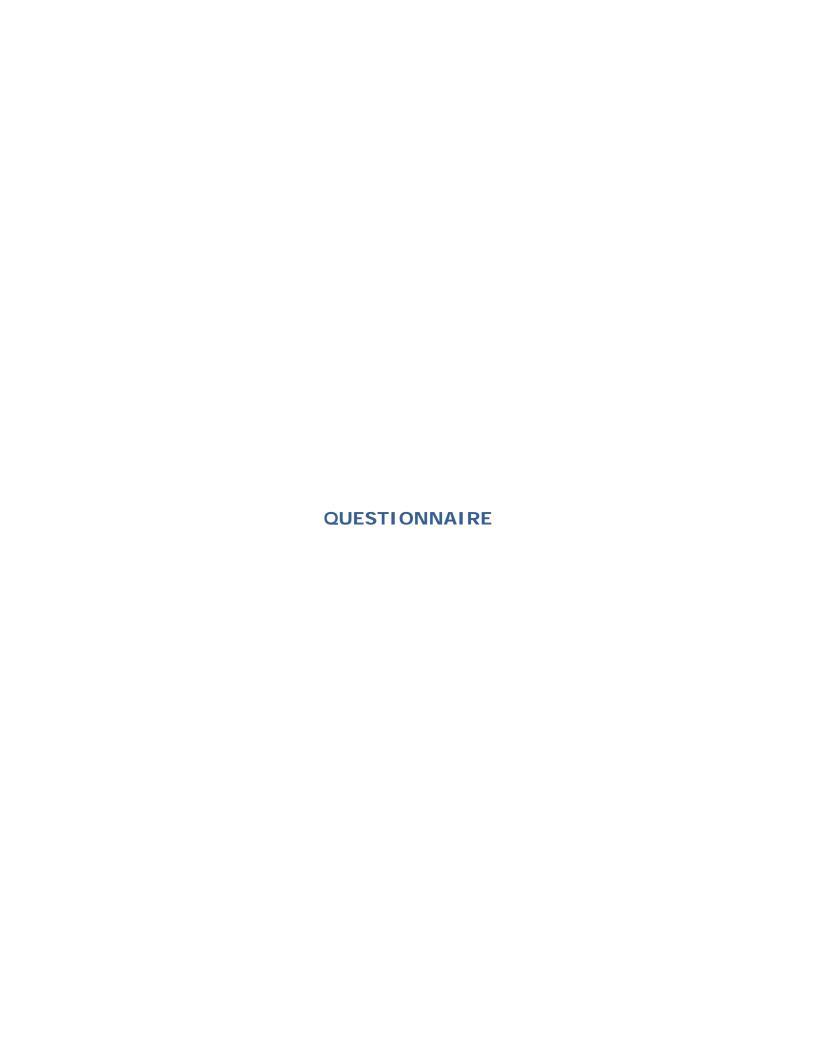
# Statistical Margins due to the sampling process (at the 95% level of confidence)

#### various sample sizes are in rows

#### various observed results are in columns

	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	
	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	_
N=50	6,0	8,3	9,9	11,1	12,0	12,7	13,2	13,6	13,8	13,9	N=50
N=500	1,9	2,6	3,1	3,5	3,8	4,0	4,2	4,3	4,4	4,4	N=500
N=1000	1,4	1,9	2,2	2,5	2,7	2,8	3,0	3,0	3,1	3,1	N=1000
N=1500	1,1	1,5	1,8	2,0	2,2	2,3	2,4	2,5	2,5	2,5	N=1500
N=2000	1,0	1,3	1,6	1,8	1,9	2,0	2,1	2,1	2,2	2,2	N=2000
N=3000	0,8	1,1	1,3	1,4	1,5	1,6	1,7	1,8	1,8	1,8	N=3000
N=4000	0,7	0,9	1,1	1,2	1,3	1,4	1,5	1,5	1,5	1,5	N=4000
N=5000	0,6	0,8	1,0	1,1	1,2	1,3	1,3	1,4	1,4	1,4	N=5000
N=6000	0,6	0,8	0,9	1,0	1,1	1,2	1,2	1,2	1,3	1,3	N=6000
N=7000	0,5	0,7	0,8	0,9	1,0	1,1	1,1	1,1	1,2	1,2	N=7000
N=7500	0,5	0,7	0,8	0,9	1,0	1,0	1,1	1,1	1,1	1,1	N=7500
N=8000	0,5	0,7	0,8	0,9	0,9	1,0	1,0	1,1	1,1	1,1	N=8000
N=9000	0,5	0,6	0,7	0,8	0,9	0,9	1,0	1,0	1,0	1,0	N=9000
N=10000	0,4	0,6	0,7	0,8	0,8	0,9	0,9	1,0	1,0	1,0	N=10000
N=11000	0,4	0,6	0,7	0,7	0,8	0,9	0,9	0,9	0,9	0,9	N=11000
N=12000	0,4	0,5	0,6	0,7	0,8	0,8	0,9	0,9	0,9	0,9	N=12000
N=13000	0,4	0,5	0,6	0,7	0,7	0,8	0,8	0,8	0,9	0,9	N=13000
N=14000	0,4	0,5	0,6	0,7	0,7	0,8	0,8	0,8	0,8	0,8	N=14000
N=15000	0,3	0,5	0,6	0,6	0,7	0,7	0,8	0,8	0,8	0,8	N=15000
	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	
	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	

ABBR.	COUNTRIES	INSTITUTES	N° INTERVIEWS		WORK TES	POPULATION 15+
BE	Belgium	TNS Dimarso	1.006	25/05/2013	09/06/2013	8.939.546
BG	Bulgaria	TNS BBSS	1.025	25/05/2013	02/06/2013	6.537.510
CZ	Czech Rep.	TNS Aisa	1.026	24/05/2013	06/06/2013	9.012.443
DK	Denmark	TNS Gallup DK	1.010	25/05/2013	09/06/2013	4.561.264
DE	Germany	TNS Infratest	1.505	24/05/2013	09/06/2013	64.336.389
EE	Estonia	Emor	1.008	24/05/2013	09/06/2013	945.733
ΙE	Ireland	IMS Millward Brown	1.001	25/05/2013	09/06/2013	3.522.000
EL	Greece	TNS ICAP	1.002	25/05/2013	08/06/2013	8.693.566
ES	Spain	TNS Demoscopia	1.008	24/05/2013	09/06/2013	39.127.930
FR	France	TNS Sofres	1.053	24/05/2013	08/06/2013	47.756.439
ΙT	Italy	TNS Italia	1.025	25/05/2013	07/06/2013	51.862.391
CY	Rep. of Cyprus	Synovate	506	24/05/2013	09/06/2013	660.400
LV	Latvia	TNS Latvia	1.018	25/05/2013	09/06/2013	1.447.866
LT	Lithuania	TNS LT	1.023	25/05/2013	09/06/2013	2.829.740
LU	Luxembourg	TNS ILReS	502	25/05/2013	09/06/2013	434.878
HU	Hungary	TNS Hoffmann Kft	1.033	25/05/2013	09/06/2013	8.320.614
MT	Malta	MISCO	500	24/05/2013	09/06/2013	335.476
NL	Netherlands	TNS NIPO	1.013	24/05/2013	09/06/2013	13.371.980
AT	Austria	Österreichisches Gallup-Institut	1.034	24/05/2013	09/06/2013	7.009.827
PL	Poland	TNS OBOP	1.000	25/05/2013	09/06/2013	32.413.735
PT	Portugal	TNS EUROTESTE	1.007	28/05/2013	09/06/2013	8.080.915
RO	Romania	TNS CSOP	1.053	25/05/2013	04/06/2013	18.246.731
SI	Slovenia	RM PLUS	1.005	25/05/2013	09/06/2013	1.759.701
SK	Slovakia	TNS Slovakia	1.000	25/05/2013	09/06/2013	4.549.955
FI	Finland	TNS Gallup Oy	1.003	25/05/2013	09/06/2013	4.440.004
SE	Sweden	TNS GALLUP	1.000	25/05/2013	09/06/2013	7.791.240
UK	United Kingdom	TNS UK	1.314	25/05/2013	09/06/2013	51.848.010
TOTAL EU27			26.680	24/05/2013	09/06/2013	408.836.283
HR	Croatia	Puls	1.000	25/05/2013	09/06/2013	3.749.400
TOTAL EU28			27.680	24/05/2013	09/06/2013	412.585.683



### E. ANTI-MICROBIAL RESISTANCE

**ASK ALL** 

### QE1a Have you taken any antibiotics orally such as tablets, powder or syrup in the last 12 months?

(ONE ANSWER ONLY) (N)

Yes 1 No 2

EB72.5 QD1a

ASK QE1b AND QE1c IF "YES", CODE 1 IN QE1a - OTHERS GO TO QE2a

### QE1b How did you obtain the last course of antibiotics that you used? (READ OUT – ONE ANSWER ONLY)

From a medical prescription	1
Administered by a medical practitioner	2
You had some left over from a previous course	3
Without prescription from a pharmacy	4
Without prescription from elsewhere	5
Don't remember (SPONTANEOUS)	6
DK	7

EB72.5 QD1b

### QE1c What was the reason for last taking antibiotics that you used? (SHOW CARD – READ OUT – MULTIPLE ANSWERS POSSIBLE)

Pneumonia (an infection causing an inflammation of one or both lungs)	1,
Bronchitis (inflammation and swelling of the bronchi, the airways that carry airflow from the trachea into the lungs) Rhinopharyngitis (inflammation of the mucous membrane of the nose and	2,
pharynx)	3,
Flu	4,
Cold	5,
Sore throat	6,
Cough	7,
Fever	8,
Headache	9,
Diarrhea	10,
Urinary tract infection	11,
Skin or wound infection	12,
Other (SPONTANEOUS)	13,
DK	14,

EB72.5 QD1c

**ASK ALL** 

### QE2a For each of the following statements, please tell me whether you think it is true or false.

(ONE ANSWER PER LINE)

	(READ OUT)	True	False	DK
1	Antibiotics kill viruses	1	2	3
2	Antibiotics are effective against cold and flu	1	2	3
3	Unnecessary use of antibiotics make them become ineffective	1	2	3
4	Taking antibiotics often has side-effects such as diarrhea	1	2	3

EB72.5 QD2a

### QE2b Please tell me to what extent you agree or disagree with the following statement: Everyone has a role to play to ensure that antibiotics remain effective.

(READ OUT - ONE ANSWER ONLY)

Totally agree	1
Tend to agree	2
Tend to disagree	3
Totally disagree	4
DK	5

EB72.5 QD2b

# QE3a In the last 12 months, do you remember getting any information about not taking any antibiotics unnecessarily, for example, messages about not taking antibiotics in case of cold or flu?

(ONE ANSWER ONLY) (N)

Yes	1
No	2

EB72.5 QD3a

EB72.5 QD3d

ASK QE3b TO QE3d IF "YES", CODE 1 IN QE3a - OTHERS GO TO QE4

#### QE3b Where did you first get this information about not taking any antibiotics unnecessarily? (DO NOT READ OUT - DO NOT SHOW CARD - USE THE PRE-CODED LIST - ONE ANSWER ONLY) A doctor told me 1 A pharmacist told me 2 Another health professional (e.g. nurse, physical therapist) told me 3 A family member or friend told me 4 I saw it on a TV advertisement 5 I saw it in a leaflet or on a poster 6 7 I read it in a newspaper or I saw it on the TV news I heard it on the radio 8 I saw it on the Internet 9 Other 10 DK 11 EB72.5 QD3b QE3c Did the information that you received change your views on antibiotics? (ONE ANSWER ONLY) (N) Yes No 2 DK 3 EB72.5 QD3c ASK QE3d IF "YES", CODE 1 IN QE3c - OTHERS GO TO QE4 QE3d In what way did this information change your views on antibiotics? (READ OUT - MULTIPLE ANSWERS POSSIBLE) You will always consult a doctor in situations when you think you need an antibiotic 1, You will no longer self-medicate with antibiotics 2, You will no longer take antibiotics without a prescription from a doctor 3. You will no longer keep left over antibiotics for next time you are ill 4, Other (SPONTANEOUS) 5, None (SPONTANEOUS) 6, DK 7,

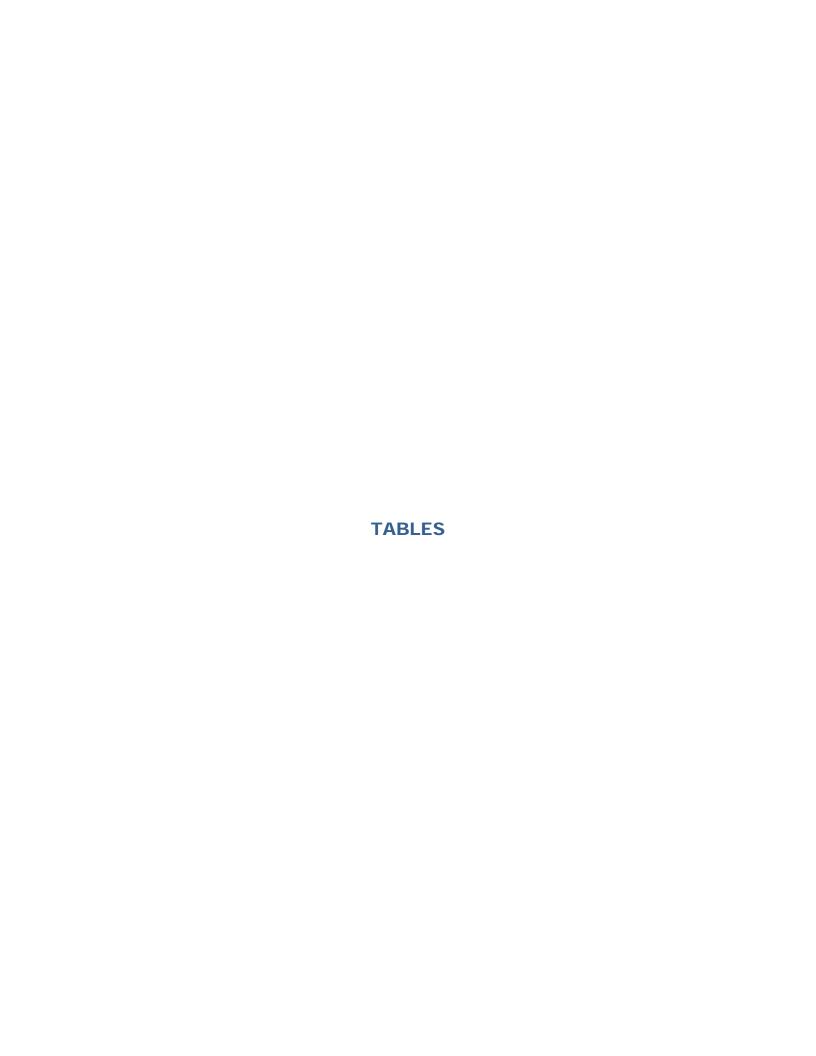
### ASK ALL

### QE4 Which of the following sources of information would you use in order to get trustworthy information on antibiotics?

(SHOW CARD - READ OUT - MAX. 3 ANSWERS)

A doctor	1,
A nurse	2,
A pharmacy	3,
A hospital	4,
Another health care facility	5,
Family or friends	6,
The Internet site from the National Government\the Ministry of Health	7,
The Internet site from the (NATIONAL PUBLIC HEALTH INSTITUTE - USE	
APPROPRIATE NAMING IN EACH COUNTRY)	8,
The Internet site on Public Health from the European Union	9,
Another health related Internet site	10,
A Health Medical Encyclopedia	11,
A national, independent public health body or organisation	12,
A newspaper or magazine	13,
A health related magazine	14,
Other (SPONTANEOUS)	15,
I am not looking for information on antibiotics (SPONTANEOUS)	16,
DK	17,

EB72.5 QD4



QE1a Avez-vous pris des antibiotiques par voie orale, tels que des comprimés, de la poudre ou du sirop au cours des 12 derniers mois ?

QE1a Have you taken any antibiotics orally such as tablets, powder or syrup in the last 12 months?

QE1a Haben Sie in den vergangenen 12 Monaten Antibiotika in oraler Form eingenommen, z.B. als Tabletten, Pulver oder Sirup?

		0	ui	N	on
		Υ€	es	N	lo
				NI	ein
		Ji		INE	
	%	EB	Diff. EB	EB	Diff. EB
	70	79.4	72.5	79.4	72.5
	EU 27	35	-5	65	5
	BE	38	2	62	-2
	BG	37	2	63	-2
	CZ	33	0	67	0
	DK	31	1	69	-1
	DE	27	-1	73	1
	EE	35	1	65	-1
O	IE	43	-2	57	2
<b>(</b>	EL	36	2	64	-2
	ES	38	-15	62	15
O	FR	44	2	56	-2
O	IT	36	-21	64	21
<b>(</b>	CY	47	3	53	-3
	LV	39	8	61	-8
	LT	39	2	61	-2
	LU	43	3	57	-3
	HU	29	-7	71	7
	MT	48	-7	52	7
	NL	28	-2	72	2
	AT	33	-4	67	4
	PL	26	-7	74	7
	PT	38	5	62	-5
	RO	47	-4	53	4
<b>(</b>	SI	28	1	72	-1
<b>9</b>	SK	41	-3	59	3
	FI	36	4	64	-4
	SE	24	2	76	-2
	UK	41	-1	59	1
	HR	32		68	

QE1b Comment avez-vous obtenu le dernier traitement antibiotique que vous avez pris ?

QE1b How did you obtain the last course of antibiotics that you used?

QE1b Wie haben Sie die letzte Antibiotikakur erhalten, die Sie durchgeführt haben?

	presci	ur ription licale	Adminis une pe du c méd	rsonne	restait d'un pr	us en un peu écédent ement	prescr dans	ins iption, une macie	prescr	ins iption, eurs	р	souvient as ITANE)	N	SP
	med	m a dical ription		istered nedical tioner	left ove a pre	d some er from evious urse	prescr fror	nout ription m a macy	presci fro	nout ription om vhere	reme (SPON	on't ember FANEOU S)	С	DΚ
	Versch	ztlicher reibung zept)	Ar	reicht	noch v von der Antibio	atten welche letzten itikakur irig	Aus einer Von e Apotheke, ohne Rezept ohne R		n Stelle, Rezept	nicht e	mich rinnern NTAN)	V	/N	
%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5
EU 27	87	0	8	0	2	0	3	0	0	0	0	0	0	0
BE	83	-5	9	2	3	1	2	0	1	1	1	0	1	1
BG	79	0	11	-1	0	-1	7	2	0	-1	3	3	0	-2
CZ	91	1	7	- 1	0	- 1	1	0	1	1	0	0	0	0
DK	77	-3	17	0	1	0	2	2	3	1	0	0	0	0
DE	89	-3	9	3	1	0	0	-1	0	0	1	1	0	0
EE	79	6	13	-2	2	-2	3	-2	2	- 1	0	0	1	1
ΙE	81	- 1	10	-4	2	2	6	5	1	0	0	0	0	-2
EL	73	-8	10	2	1	-2	15	8	0	-1	1	1	0	0
ES	84	5	8	-5	4	1	3	-1	1	0	0	0	0	0
FR	96	1	1	-1	1	0	1	0	0	-1	1	1	0	0
ΙΤ	88	-2	7	2	3	0	2	1	0	- 1	0	0	0	0
CY	84	-3	6	- 1	0	0	10	4	0	0	0	0	0	0
LV	85	4	7	0	4	-1	3	-3	0	- 1	1	1	0	0
LT	43	8	51	0	3	-2	2	-5	1	0	0	-1	0	0
LU	94	-1	3	0	3	2	0	0	0	-1	0	0	0	0
HU	91	-1	1	1	2	0	5	0	1	1	0	-1	0	0
MT	77	-2	21	6	1	0	1	-3 0	0	0	0	0	0	-1 0
NL AT	82	-2	15	2	1	0	•	· ·		0	"	0		
AT PL	82 96	-2 2	11 2	2 0	5 1	3 0	1 1	-3 0	1 0	0 0	0	0 -2	0	0
PT	88	-5	6	1	2	1	2	1	1	1	0	-2 1	0	0
RO	75	-5 5	5	-4	2	-1	2 17	1	' 1	1	0	-1	0	-1
SI	92	6	5	-6	1	1	2	0	0	0	0	0	0	-1
SK	95	1	1	-0 -1	2	0	2	0	0	0	0	0	0	0
FI	93	3	7	-1 -2	0	0	0	-1	0	0	0	0	0	0
SE	66	8	32	-8	1	0	1	0	0	0	0	0	0	0
UK	87	1	9	-2	1	1	2	0	1	0	0	0	0	0
HR	90		4		1		4		1		0		0	

QE1c What was the reason for last taking antibiotics that you used? (MULTIPLE ANSWERS POSSIBLE)

		cause une inflar	(une infection qui mmation d'un ou umons)	et un encon bronches, les v qui acheminent	une inflammation nbrement des oies respiratoires le flux d'air de la s les poumons)	inflammation de	aryngite (une la muqueuse du l pharynx)	
		an inflammatio	infection causing n of one or both ngs)	swelling of the bi	flammation and ronchi, the airways v from the trachea lungs)	the mucous mem	(inflammation of abrane of the nose narynx)	
		eine Entzündung	lung (Infekt, der einer oder beider el hervorruft)	Schwellung der E Atemwege, übe	ntzündung und Bronchien, d.h. der er die die Luft von die Lunge gelangt)	Rhinopharyngitis (Entzündung der Nasenschleimhaut und des Rachens)		
		EB	Diff.	EB	Diff.	EB	Diff.	
	%	79.4	EB	79.4	EB	79.4	EB	
	EU 27		72.5	18	72.5 <b>1</b>	7	72.5 -1	
	BE	5 5	1 0	24			- <i>1</i> 1	
	BG	6	-1	24	<i>0</i> 5	15 3	0	
	CZ	7	- 1 1	34	7	16	6	
	DK	24	9	6	-1	20	7	
	DE	5	1	21	1	4	0	
	EE	8	2	13	1	5	0	
	IE	6	1	16	-6	4	-2	
	EL	4	-1	8	0	7	3	
	ES	3	0	8	0	6	0	
	FR	3	0	19	-1	9	-3	
	ΙΤ	2	-1	30	6	12	-4	
(e)	CY	3	1	8	- 1	2	-4	
	LV	5	1	12	-2	5	1	
	LT	6	0	22	6	2	-2	
	LU	5	2	17	4	7	-4	
	HU	8	- 1	14	2	3	-2	
	MT	4	1	9	2	3	0	
	NL	13	2	9	-5	16	4	
	AT	5	-6	34	11	6	2	
	PL	8	5	22	-2	8	4	
	PT	5	3	9	0	7	6	
	RO	8	2	12	2	5	- 1	
	SI	6	-5	11	1	6	1	
	SK	6	- 1	32	7	5	0	
	FI	5	0	20	1	18	-3	
	SE	8	1	4	-2	10	- 1	
	UK	4	2	12	-2	2	0	
	HR	5		15		9		

QE1c What was the reason for last taking antibiotics that you used? (MULTIPLE ANSWERS POSSIBLE)

		La gi	rippe	Un rh	nume	Un mal	de gorge	De la	ı toux	De la	fièvre	Un mal	de tête
		F	lu	Cc	old	Sore	throat	Сог	ugh	Fe	ver	Head	dache
		Gri	ppe	Erkä	Itung	Halssch	ımerzen	Hus	sten	Fie	ber	Kopfsch	nmerzen
	%	EB 79.4	Diff. EB 72.5										
	EU 27	18	-2	13	-1	11	-4	7	-2	7	-2	5	0
	BE	17	- 1	9	-3	10	-4	7	1	4	0	4	- 1
	BG	34	8	23	-9	17	- 1	18	3	16	2	6	0
	CZ	16	-3	5	-3	12	-2	6	- 1	10	-2	4	-2
	DK	8	-2	3	0	9	- 1	2	0	1	-2	5	4
	DE	17	-6	17	6	7	- 1	5	0	7	3	2	- 1
	EE	14	1	16	1	9	2	9	3	6	-2	6	-3
	IE	20	5	12	7	16	1	5	2	3	1	3	1
	EL	22	-3	23	-4	14	-3	13	0	12	2	7	1
	ES	20	-12	17	-7	13	-12	4	-13	7	-11	5	-7
	FR	16	8	10	3	11	-3	5	0	7	1	8	4
	ΙΤ	17	-6	4	-3	16	-3	12	4	11	1	1	0
	CY	31	3	24	-3	9	0	7	0	7	3	5	-3
	LV	18	7	26	-4	11	-2	7	1	4	2	4	0
	LT	21	2	19	0	13	3	6	-2	8	0	3	0
	LU	24	5	8	4	6	-2	5	4	7	6	6	6
	HU	24	2	19	-4	27	-4	16	1	16	-3	6	-3
	MT	30	4	11	-6	30	- 1	11	4	11	2	3	0
	NL	6	2	4	0	6	2	5	1	1	- 1	2	0
	AT	29	-2	24	1	11	-12	14	-6	19	-2	6	-4
	PL	22	3	18	-4	9	-5	5	0	7	0	5	2
	PT	22	0	11	3	15	-6	5	1	6	- 1	3	1
	RO	26	6	35	-5	6	-4	9	-4	9	-5	11	0
<b>(</b>	SI	10	5	7	0	23	3	8	3	8	0	4	-3
<b>!</b>	SK	20	-4	5	-2	25	-2	21	3	23	1	12	2
	FI	7	0	4	3	7	4	3	2	3	1	1	0
	SE	6	0	3	0	9	1	3	2	2	- 1	3	1
	UK	13	1	7	0	8	-2	6	0	3	0	3	0
	HR	11		15		30		8		1		4	

QE1c What was the reason for last taking antibiotics that you used? (MULTIPLE ANSWERS POSSIBLE)

		De la d	iarrhée		fection naire	peau o	tion de la u d'une sure	Autre (SF	PONTANE)	N:	SP
		Diar	rhea		y tract ction		wound		her ANEOUS)	D	K
		Diarrhöe/	'Durchfall	Harnwe	gsinfekt		- oder nfektion	Andere (S	SPONTAN)	W	/N
	%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5
	EU 27	1	0	9	2	7	1	21	1	1	- 1
	BE	3	2	8	3	8	2	15	-3	1	- 1
	BG	О	0	5	0	2	0	9	3	0	- 1
	CZ	1	-2	14	0	4	1	8	0	2	1
	DK	1	- 1	15	1	9	-9	18	-6	1	0
	DE	1	- 1	8	- 1	9	0	20	3	4	1
	EE	0	-2	8	4	6	4	27	-6	3	1
	ΙE	1	1	8	-2	4	- 1	17	-2	5	3
	EL	1	1	4	0	4	- 1	19	1	1	1
	ES	1	- 1	8	4	6	3	25	7	0	- 1
	FR	2	1	9	2	7	0	25	- 1	1	1
	IT	2	1	8	1	3	- 1	12	-2	0	0
	CY	4	1	4	-1	17	12	23	-3	0	0
	LV	1	1	3	0	5	0	17	-8	3	2
	LT LU	0 4	0 4	3 10	-1 2	4 9	-1 3	21 24	-4 0	0 3	-2 2
	HU	3	1	4	1	2	3 1	9	3	3 1	0
	MT	0	0	5	2	6	- 1	20	8	3	0
	NL	1	-1	17	2	15	4	22	-9	2	0
	AT	3	0	12	4	7	3	9	3	0	0
	PL	1	0	4	0	2	0	16	2	1	-3
	PT	О	0	6	1	8	3	22	1	4	1
	RO	1	0	7	- 1	3	0	20	6	1	-3
	SI	1	0	10	- 1	10	2	29	0	1	1
<b>i</b>	SK	1	0	7	-2	2	0	9	1	1	0
	FI	1	0	7	-3	17	3	21	-3	0	0
	SE	1	- 1	15	-8	14	-2	35	8	0	0
	UK	0	-1	12	5	11	1	30	-5	2	0
	HR	О		10		5		17		0	

QE1c What was the reason for last taking antibiotics that you used? (MULTIPLE ANSWERS POSSIBLE)  $\,$ 

			adie ment		otôme ment		die et Itôme
		Ilness	s only	Sympto	om only		s and otom
			adie ment	Nur Sy	mptom		die et Itôme
	%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5
	EU 27	42	1	26	1	10	-2
	BE	48	-2	23	4	14	4
	BG	52	-6	16	-2	23	6
	CZ	51	2	23	-6	16	2
	DK	42	9	32	-5	7	2
	DE	46	-2	23	0	7	-2
	EE	38	1	23	5	9	0
Q	ΙE	43	-3	26	-3	8	4
	EL	44	1	22	-2	14	- 1
	ES	41	5	27	4	7	-15
	FR	40	2	25	-3	9	2
	IT	46	0	31	5	12	-3
	CY	42	-3	24	8	13	1
	LV	50	4	20	0	10	1
	LT	51	5	17	0	11	1
	LU	39	-11	25	0	9	9
	HU	42	1	32	0	16	-5
	MT	28	-6	32	-5	19	4
	NL	34	0	33	4	9	4
	AT	45	-3	18	- 1	29	3
	PL	59	4	16	- 1	8	- 1
	PT	38	2	28	-9	8	5
	RO	48	5	14	-4	18	-4
<b>—</b>	SI	22	-4	38	2	11	3
	SK	41	2	29	- 1	20	-3
	FI	45	0	30	3	4	1
	SE	23	- 1	38	-5	4	-2
<b>1</b>	UK	29	0	34	4	5	1
	HR	30		39		14	

QE2a.1 Pour chacune des propositions suivantes, veuillez me dire si vous pensez qu'elle est vraie ou fausse. Les antibiotiques tuent les virus

QE2a.1 For each of the following statements, please tell me whether you think it is true or false. Antibiotics kill viruses

QE2a.1 Sagen Sie mir bitte für jede der folgenden Aussagen, ob sie Ihrer Meinung nach richtig oder falsch ist. Antibiotika zerstören Viren

		Vr	aie.	Fau	usse.	N	SP
		TF	RUE	FA	LSE	[	DK .
		Ric	htig.	Fal	sch.	V	VN
	%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5
	EU 27	49	-4	40	4	11	0
	BE	44	5	52	-4	4	-1
	BG	64	2	21	-1	15	-1
	CZ	58	-11	36	10	6	1
	DK	38	-5	57	5	5	0
	DE	48	-5	36	5	16	0
	EE	54	-3	36	4	10	- 1
O	ΙE	40	-6	51	6	9	0
	EL	70	-3	25	1	5	2
	ES	57	-6	29	6	14	0
O	FR	29	-2	59	1	12	1
	IT	58	-4	33	4	9	0
(	CY	67	4	21	0	12	-4
	LV	58	-2	27	1	15	1
	LT	58	-9	27	7	15	2
	LU	31	-13	58	12	11	1
	HU	52	-13	38	11	10	2
	MT	67	-8	23	5	10	3
	NL	38	-5	56	4	6	1
	AT	62	-11	29	12	9	- 1
	PL	54	- 1	32	-1	14	2
	PT	69	-9	19	5	12	4
	RO	70	- 1	15	1	15	0
	SI	45	1	45	-2	10	1
	SK	64	-2	31	2	5	0
	FI	39	3	55	-3	6	0
	SE	23	- 1	74	1	3	0
	UK	41	- 1	52	2	7	-1
	HR	44		48		8	

QE2a.2 Pour chacune des propositions suivantes, veuillez me dire si vous pensez qu'elle est vraie ou fausse. Les antibiotiques sont efficaces contre le rhume et la grippe

QE2a.2 For each of the following statements, please tell me whether you think it is true or false. Antibiotics are effective against cold and flu

QE2a.2 Sagen Sie mir bitte für jede der folgenden Aussagen, ob sie Ihrer Meinung nach richtig oder falsch ist. Antibiotika sind ein effektives Mittel gegen Grippe und Erkältungen

		Vr	aie.	Fau	ISSe.	N	SP
		TE	RUE	FA	LSE		DK .
		Ric	htig.	Fal	sch.	V	VN
	%	EB 79.4	Diff. EB	EB 79.4	Diff. EB	EB 79.4	Diff. EB
			72.5		72.5		72.5
	EU 27	41	-6	52	6	7	0
	BE	29	1	69	0	2	-1
	BG	57	-3	30	3	13	0
	CZ	33	-11	63	10	4	1
	DK	20	-11	75	10	5	1
	DE	49	-8	43	10	8	-2
	EE	37	-6	54	6	9	0
	IE	31	-7	64	9	5	-2
	EL	62	-8	34	6	4	2
	ES	46	-15	44	12	10	3
	FR	28	-2	64	0	8	2
	IT	40	-4	52	3	8	1
	CY	70	2	24	1	6	-3
	LV	48	-4	38	3	14	1
	LT	50	-10	38	9	12	1
	LU	30	-6	64	7	6	- 1
	HU	56	-10	37	8	7	2
	MT	54	-11	37	7	9	4
	NL	24	-6	73	7	3	-1
	AT	61	-9	33	7	6	2
	PL	57	-4	34	4	9	0
	PT	61	-12	27	9	12	3
	RO	55	-4	33	5	12	- 1
<b>(</b>	SI	31	1	61	-2	8	1
	SK	43	-8	53	7	4	1
	FI	22	0	74	2	4	-2
	SE	21	-7	77	9	2	-2
	UK	26	-3	70	5	4	-2
	HR	40		55		5	

QE2a.3 Pour chacune des propositions suivantes, veuillez me dire si vous pensez qu'elle est vraie ou fausse. La surconsommation d'antibiotiques les rend inefficaces

QE2a.3 For each of the following statements, please tell me whether you think it is true or false. Unnecessary use of antibiotics make them become ineffective

QE2a.3 Sagen Sie mir bitte für jede der folgenden Aussagen, ob sie Ihrer Meinung nach richtig oder falsch ist. Die unnötige Einnahme von Antibiotika verringert deren Wirksamkeit

		Vr	aie.	Fau	isse.	N	SP
						_	
		TF	RUE	FA	LSE	E	)K
		Ricl	htig.	Fal	sch.	V	/N
		EB	Diff.	EB	Diff.	EB	Diff.
	%	79.4	EB 72.5	79.4	EB 72.5	79.4	EB 72.5
	EU 27	84	1	8	0	8	-1
Ŏ	BE	88	1	10	0	2	-1
	BG	78	-3	5	1	17	2
	CZ	90	-1	5	-1	5	2
	DK	97	1	1	-1	2	0
	DE	87	3	4	-2	9	- 7
	EE	80	2	9	-1	11	- 1
Ŏ	ΙE	85	-4	10	5	5	- 1
	EL	93	1	4	- 1	3	0
	ES	87	-1	5	1	8	0
	FR	92	5	4	-2	4	-3
	IT	68	3	18	- 1	14	-2
	CY	92	-2	3	2	5	0
	LV	79	-2	8	1	13	1
	LT	84	2	6	-2	10	0
	LU	89	4	9	0	2	-4
	HU	76	1	14	1	10	-2
	MT	90	-4	4	2	6	2
	NL	94	1	3	- 1	3	0
	AT	83	3	8	-1	9	-2
	PL	85	0	8	2	7	-2
	PT	79	-5	7	1	14	4
	RO	58	1	15	1	27	-2
	SI	95	1	2	- 1	3	0
	SK	88	-2	9	1	3	1
	FI	90	-2	6	2	4	0
	SE	98	1	2	- 1	0	0
	UK	89	0	7	1	4	-1
	HR	87		8		5	

QE2a.4 Pour chacune des propositions suivantes, veuillez me dire si vous pensez qu'elle est vraie ou fausse. La prise d'antibiotiques a souvent des effets secondaires tels que la diarrhée

QE2a.4 For each of the following statements, please tell me whether you think it is true or false. Taking antibiotics often has side-effects such as diarrhea

QE2a.4 Sagen Sie mir bitte für jede der folgenden Aussagen, ob sie Ihrer Meinung nach richtig oder falsch ist. Mit der Einnahme von Antibiotika gehen häufig Nebenwirkungen einher, z.B. Diarrhöe/Durchfall

		.,		_			22
		Vr	aie.	Fau	isse.	N	SP
		TF	RUE	FA	LSE	С	K
		Ric	htig.	Fal	sch.	V	/N
			Diff.		Diff.		Diff.
	%	EB 79.4	EB 72.5	EB 79.4	EB 72.5	EB 79.4	EB 72.5
	EU 27	66	-2	15	0	19	2
	BE	67	1	27	2	6	-3
	BG	69	-2	5	2	26	0
	CZ	63	6	24	-9	13	3
	DK	69	-3	13	4	18	- 1
	DE	67	-7	10	1	23	6
	EE	77	- 1	9	0	14	1
	ΙE	57	-12	19	6	24	6
	EL	72	2	12	0	16	-2
	ES	61	-9	15	4	24	5
	FR	66	-3	17	2	17	1
	IT	68	4	16	-4	16	0
	CY	70	-8	5	2	25	6
	LV	65	-3	13	-1	22	4
	LT	69	-5	11	1	20	4
	LU	78	14	11	-4	11	-10
	HU	62	12	19	-1	19	-11
	MT	67	-2	12	3	21	- 1
	NL	61	6	21	-7	18	1
	AT	72	5	13	-1	15	-4
	PL	78	4	9	-3	13	- 1
<b></b>	PT	63	0	11	-1	26	1
	RO	45	-5	17	4	38	1
<b>(</b>	SI	74	1	14	-2	12	1
	SK	75	1	16	0	9	- 1
	FI	75	-7	19	7	6	0
	SE	62	-6	23	10	15	-4
	UK	64	-5	19	3	17	2
<b>(2)</b>	HR	66		20		14	

QE2a.5 Pour chacune des propositions suivantes, veuillez me dire si vous pensez qu'elle est vraie ou fausse. Moyenne

QE2a.5 For each of the following statements, please tell me whether you think it is true or false.

Average

QE2a.5 Sagen Sie mir bitte für jede der folgenden Aussagen, ob sie Ihrer Meinung nach richtig oder falsch ist.

#### Durchschnitt

								0.1					
			ins une réponse		onne onse		onne onse		nnes nses		nnes inses		nnes nses
			оронос	l	J. 130	l	J. 130	l	11303	Topo	,, 1303	l	1,303
		At lea	st one	Осо	rrect	1 co	rrect	2 co	rrect	3 со	rrect	4 co	rrect
		correct	answer	ans	wer	ans	wer	ansı	wers	ansv	wers	ansv	wers
		Mindest	tens ein										
			tige		onne onse		htige wort		htige orten		htige orten		htige orten
		Ant	wort	ГСРС		7 (11)		7 (11000		7 (11000		7 (11000	
	%	EB	Diff. EB	EB	Diff. EB	EB	Diff. EB	EB	Diff. EB	EB	Diff. EB	EB	Diff. EB
	,,,	79.4	72.5	79.4	72.5	79.4	72.5	79.4	72.5	79.4	72.5	79.4	72.5
	EU 27	94	1	6	- 1	15	- 1	32	-2	25	2	22	2
	BE	97	0	3	0	11	0	24	0	31	2	31	-2
	BG	86	-2	14	2	16	1	41	-4	16	2	13	0
	CZ	96	- 1	4	1	11	-8	34	-3	31	2	20	8
	DK	99	1	1	- 1	8	-2	19	-6	33	7	38	1
	DE	93	0	7	0	18	0	31	-5	25	1	20	5
	EE	93	1	7	- 1	10	-3	32	- 1	31	3	20	2
	ΙE	96	1	4	- 1	13	3	28	-3	31	3	23	-2
	EL	96	0	4	0	17	-2	45	-4	20	4	14	1
	ES	93	-2	7	2	19	0	36	-10	22	4	16	4
	FR	97	0	3	0	11	0	22	-2	30	0	34	1
	ΙΤ	92	4	8	-4	17	-2	36	4	25	2	14	0
<b>(2)</b>	CY	95	- 1	5	1	19	4	50	-2	15	-4	11	1
	LV	89	-2	11	2	19	1	34	-6	24	4	13	0
	LT	92	0	8	0	16	-2	39	-6	21	3	15	4
	LU	99	4	1	-4	11	-3	24	-4	26	-4	38	15
	HU	91	4	9	-4	22	-5	32	-4	20	5	16	7
	MT	95	-2	5	2	21	0	41	-6	19	0	14	4
	NL	99	1	1	- 1	9	-4	26	-2	33	3	31	4
	AT	93	3	7	-3	15	-6	45	-2	21	7	13	5
	PL	94	1	6	- 1	12	-5	45	5	20	0	17	1
	PT	87	-4	13	4	21	-2	41	-12	16	5	9	4
	RO	78	3	22	-3	26	4	33	-5	14	3	4	0
<b>(</b>	SI	98	0	2	0	10	0	28	- 1	31	6	29	-4
•	SK	95	0	5	0	14	0	35	-3	23	0	24	4
	FI	95	-3	5	3	6	1	19	-3	31	4	39	-5
-1400-00-00-00-00-00-00-00-00-00-00-00-00-	SE	99	- 1	1	1	6	0	18	-3	31	-3	43	4
<b>4</b>	UK	96	0	4	0	11	1	24	-2	30	0	32	1
	HR	64		28		8							

QE2a.5 Pour chacune des propositions suivantes, veuillez me dire si vous pensez qu'elle est vraie ou fausse.

Moyenne

QE2a.5 For each of the following statements, please tell me whether you think it is true or false.

Average

 ${\tt QE2a.5}$  Sagen Sie mir bitte für jede der folgenden Aussagen, ob sie Ihrer Meinung nach richtig oder falsch ist.

Durchschnitt

		Au moins une mauvaise réponse			ins une se NSP	Moyenne	e/Average
			ne wrong wer		ne answer )K		
			tens ein ne Ant		tens ein ort WN	Moyenne	e/Average
	%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5
	EU 27	67	-3	29	1	0	0
	BE	64	3	9	-6	0	0
	BG	74	0	40	3	0	0
	CZ	70	-12	18	3	0	0
	DK	51	-3	21	- 1	0	0
	DE	68	-6	37	5	0	0
	EE	69	-2	23	-3	0	0
	ΙE	63	1	31	6	0	0
	EL	82	-2	21	1	0	0
	ES	71	-8	35	3	0	0
	FR	51	-1	28	0	0	0
O	ΙΤ	77	0	28	-2	0	0
<b>(S)</b>	CY	81	1	31	0	0	0
	LV	73	-2	36	3	0	0
	LT	72	-7	32	2	0	0
	LU	52	-14	24	-8	0	0
	HU	72	-10	30	-8	0	0
	MT	78	-7	29	0	0	0
	NL	57	-7	24	1	0	0
	AT	81	-7	26	-3	0	0
	PL	73	-2	24	-4	0	0
	PT	80	-8	37	8	0	0
	RO	85	2	50	2	0	0
<b>(</b>	SI	61	4	23	3	0	0
	SK	72	-3	14	0	0	0
	FI	54	5	13	0	0	0
	SE	48	0	17	-5	0	0
-	UK	57	-1	22	-1	0	0
	HR						

QE2a.6 Pour chacune des propositions suivantes, veuillez me dire si vous pensez qu'elle est vraie ou fausse.

QE2a.6 For each of the following statements, please tell me whether you think it is true or false.

QE2a.6 Sagen Sie mir bitte für jede der folgenden Aussagen, ob sie Ihrer Meinung nach richtig oder falsch ist.

		Au moins une bonne réponse	0 bonne réponse	1 bonne réponse	2 bonnes réponses	3 bonnes réponses	4 bonnes réponses	Au moins une mauvaise réponse	Au moins une réponse NSP
		At least one correct answer	0 correct answer	1 correct answer	2 correct answers	3 correct answers	4 correct answers	At least one wrong answer	At least one answer DK
		Mindestens ein richtige Antwort	0 bonne réponse	1 richtige Antwort	2 richtige Antworten	3 richtige Antworten	4 richtige Antworten	Mindestens ein falsche Ant	Mindestens ein Antwort WN
	%	EB 79.4	EB 79.4	EB 79.4	EB 79.4	EB 79.4	EB 79.4	EB 79.4	EB 79.4
	EU 27	94	6	15	32	25	22	67	29
	BE	97	3	11	24	31	31	64	9
	BG	86	14	16	41	16	13	74	40
	CZ	96	4	11	34	31	20	70	18
	DK	99	1	8	19	33	38	51	21
	DE	93	7	18	31	25	20	68	37
	EE	93	7	10	32	31	20	69	23
O	ΙE	96	4	13	28	31	23	63	31
	EL	96	4	17	45	20	14	82	21
	ES	93	7	19	36	22	16	71	35
	FR	97	3	11	22	30	34	51	28
	ΙΤ	92	8	17	36	25	14	77	28
<b>(</b>	CY	95	5	19	50	15	11	81	31
	LV	89	11	19	34	24	13	73	36
	LT	92	8	16	39	21	15	72	32
	LU	99	1	11	24	26	38	52	24
	HU	91	9	22	32	20	16	72	30
	MT	95	5	21	41	19	14	78	29
	NL	99	1	9	26	33	31	57	24
	AT	93	7	15	45	21	13	81	26
	PL	94	6	12	45	20	17	73	24
	PT	87	13	21	41	16	9	80	37
	RO	78	22	26	33	14	4	85	50
<b>—</b>	SI	98	2	10	28	31	29	61	23
<b>9</b>	SK	95	5	14	35	23	24	72	14
	FI	95	5	6	19	31	39	54	13
	SE	99	1	6	18	31	43	48	17
	UK	96	4	11	24	30	32	57	22
	HR	95	5	12	33	22	28	62	21

QE2b Veuillez me dire dans quelle mesure vous êtes d'accord ou pas d'accord avec la proposition suivante : Tout le monde a un rôle à jouer pour garantir que les antibiotiques restent efficaces.

QE2b Please tell me to what extent you agree or disagree with the following statement: Everyone has a role to play to ensure that antibiotics remain effective.

QE2b Bitte sagen Sie mir, inwieweit Sie der folgenden Aussage zustimmen bzw. nicht zustimmen: "Jeder muss dazu beitragen, dass Antibiotika wirksam bleiben."

			à fait cord	Plutôt d	d'accord		ot pas cord	Pas di d'ac	u tout cord	N:	SP	To 'D'ac			l 'Pas cord'
		Totally	agree /	Tend to	o agree		d to gree	Tot disa	9	D	K	Total '	Agree'		ital gree'
			ne voll anz zu		ne eher :u		ne eher nt zu	Stim überh nich	naupt	W	'N		amt ne zu'	'Stimm	amt ne nicht u'
	%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5
	EU 27	36	-6	43	4	9	3	3	0	9	- 1	79	-2	12	3
	BE	42	-14	46	12	10	4	1	-1	1	- 1	88	-2	11	3
	BG	21	-7	46	6	7	2	3	2	23	-3	67	-1	10	4
	CZ	50	-7	37	1	5	2	2	1	6	3	87	-6	7	3
	DK	63	-12	28	11	5	2	2	0	2	- 1	91	-1	7	2
	DE	47	-14	35	9	6	1	4	2	8	2	82	-5	10	3
	EE	23	-22	43	12	13	8	6	4	15	-2	66	-10	19	12
	ΙE	46	-12	37	6	10	7	2	1	5	-2	83	-6	12	8
	EL	31	-15	54	9	9	5	1	0	5	1	85	-6	10	5
	ES	32	0	41	-7	7	1	5	1	15	5	73	-7	12	2
	FR	38	-2	43	2	10	3	4	1	5	-4	81	0	14	4
	ΙΤ	23	-5	53	3	9	5	2	0	13	-3	76	-2	11	5
	CY	58	1	26	1	7	2	3	- 1	6	-3	84	2	10	1
	LV	25	-5	44	3	10	2	3	1	18	-1	69	-2	13	3
	LT	32	-2	46	11	4	0	2	1	16	-10	78	9	6	1
	LU	46	5	39	3	8	-3	2	-2	5	-3	85	8	10	-5
	HU	25	-16	49	9	11	4	7	4	8	-1	74	-7	18	8
	MT	47	-20	36	11	4	3	0	-1	13	7	83	-9	4	2
	NL	47	-2	31	1	14	5	5	-2	3	-2	78	-1	19	3
	AT	21	-11	52	12	15	2	6	1	6	-4	73	1	21	3
	PL	11	-4	51	5	15	2	7	2	16	-5	62	1	22	4
	PT RO	22 35	-9 -7	63 41	8 7	7	4 2	1 3	0 1	7 15	-3 -3	85 76	-1	8	<i>4</i> <i>3</i>
	SI	50	-7 0	36	6	6	-2	3	- 1	5	-3 -3	86	0 6	9	-3
(H)	SK	34	-9	50	5	9	-2 2	2	0	5 5	-3 2	84	-4	11	-3 2
	FI	51	-9 -1	36	-1	7	2 1	2	1	4	0	87	-4 -2	9	2
	SE	54	- 1 -8	31	6	8	2	4	1	3	-1	85	-2 -2	12	3
	UK	45	-6	39	2	9	4	2	0	5	0	84	-2 -4	11	4
	HR	30		51		8	•	4		7		81	•	12	
-	пк	30		31		ď		4				δı		12	

QE3a Au cours des 12 derniers mois, vous souvenez-vous avoir reçu des informations recommandant de ne pas prendre des antibiotiques quand cela n'est pas nécessaire, par exemple, des messages à propos du fait de ne pas prendre d'antibiotiques pour un rhume ou une grippe ?

QE3a In the last 12 months, do you remember getting any information about not taking any antibiotics unnecessarily, for example, messages about not taking antibiotics in case of cold or flu?

QE3a Können Sie sich daran erinnern, in den vergangenen 12 Monaten Informationen gelesen oder gehört zu haben, die von der unnötigen Einnahme von Antibiotika abraten, z.B. Nachrichten darüber, dass Antibiotika bei Erkältungen und grippalen Infekten nicht eingenommen werden sollten?

		0	ui	N	on
		Ye	es	N	lo
		J	a	Ne	ein
	%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5
	EU 27	33	-4	67	4
	BE	52	1	48	-1
	BG	24	-16	76	16
	CZ	26	-1	74	1
	DK	42	-5	58	5
	DE	34	2	66	-2
	EE	22	1	78	- 1
	IE	36	5	64	-5
	EL	28	-7	72	7
	ES	20	-31	80	31
	FR	65	-2	35	2
0	IT	28	-3	72	3
	CY	27	-4	73	4
	LV	23	-5	77	5
	LT	32	4	68	-4
	LU	59	3	41	-3
	HU	17	-2	83	2
	MT	31	-3	69	3
	NL	22	7	78	-7
	AT	22	- 1	78	1
	PL	23	-11	77	11
	PT	12	- 1	88	1
	RO	29	-4	71	4
	SI	37	-13	63	13
	SK	32	-11	68	11
<b>(</b>	FI	43	-17	57	17
	SE	50	12	50	-12
	UK	31	3	69	-3
<b>②</b>	HR	41		59	

QE3b Où avez-vous d'abord obtenu cette information recommandant de ne pas prendre des antibiotiques quand cela n'est pas nécessaire ? (NE PAS LIRE – NE PAS MONTRER CARTE – UTILISER LA LISTE PRE-CODEE)

QE3b Where did you first get this information about not taking any antibiotics unnecessarily? (DO NOT READ OUT - DO NOT SHOW CARD - USE THE PRE-CODED LIST)

QE3b Wo oder von wem haben Sie zuerst gelesen oder gehört, dass Antibiotika nicht unnötigerweise eingenommen werden sollten? (NICHT VORLESEN - KARTE NICHT ZEIGEN - VORKODIERTE LISTE VERWENDEN - NUR EINE NENNUNG MÖGLICH)

		Un médecin	m'en a parlé		acien m'en a arlé	la santé (par infirmi kinésithérap	fessionnel de exemple une ère, un eute) m'en a rlé	Un membre de ma famille ou un ami m'en a parlé	
		A doctor	r told me	A pharmacist told me		Another health professional (e.g. nurse, physical therapist) told me		A family member or frier told me	
			mich darüber miert		ker hat mich informiert	Eine andere Person, die im Gesundheitswesen tätig ist, hat mich darüber informiert (Krankenschwester, Physiotherapeut)		Ein Familienmitglied oder Freund hat mich darüber informiert	
	%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5
	EU 27	27	-3	4	- 1	3	1	4	- 1
	BE	22	-2	2	- 1	2	1	4	2
	BG	41	9	4	2	2	- 1	10	8
	CZ	48	0	5	2	2	1	12	0
	DK	19	-6	2	-3	4	1	7	0
	DE	19	-8	4	-2	3	-1	4	-5
	EE	28	1	4	1	2	1	11	-2
Q	ΙE	26	7	11	0	3	0	3	0
9	EL	24	-12	5	0	2	- 1	2	-3
	ES	27	-5	3	-4	1	- 1	3	-3
	FR	13	3	2	0	1	0	1	0
	ΙΤ	56	-3	7	0	3	2	4	2
	CY	32	4	1	- 1	2	0	4	-6
	LV	33	14	3	0	1	-4	10	1
	LT	16	-7	5	0	2	1	9	2
	LU	33	6	3	2	1	- 1	5	2
	HU	48	-11	14	10	2	0	5	1
	MT	20	4	3	1	5	- 1	4	0
	NL 	19	-4	2	-10	1 _	0	3	-1
	AT	29	-15	13	3	5	-1	4	-2
	PL	36	7	3	-1	3	2	10	1
	PT	40	0	6	-4	4	-6	5	0
	RO	58	5	7	-3	2	0	6	3
(E3)	SI	33	1	5	1	1	-1	13	3
	SK	40	-3	6	0	3	1	12	2
	FI	22	-4	6	4	6	-5	6	-2
	SE	15	2	1	0	9	2	5	-2
	UK	22	-6	1	-1	4	- 1	4	0
	HR	39		5		2		7	

QE3b Où avez-vous d'abord obtenu cette information recommandant de ne pas prendre des antibiotiques quand cela n'est pas nécessaire ? (NE PAS LIRE – NE PAS MONTRER CARTE – UTILISER LA LISTE PRE-CODEE)

QE3b Where did you first get this information about not taking any antibiotics unnecessarily? (DO NOT READ OUT - DO NOT SHOW CARD - USE THE PRE-CODED LIST)

QE3b Wo oder von wem haben Sie zuerst gelesen oder gehört, dass Antibiotika nicht unnötigerweise eingenommen werden sollten? (NICHT VORLESEN - KARTE NICHT ZEIGEN - VORKODIERTE LISTE VERWENDEN - NUR EINE NENNUNG

			J'ai vu une annonce à la télévision		e brochure ffiche à ce ijet	J'ai lu à ce propos dans un journal de la presse écrite ou j'ai regardé un journal télévisé l'évoquant		J'en ai entendu parler à la radio		J'ai lu à ce propo sur Internet	
			on a TV sement	I saw it in a leaflet or on a poster		I read it in a newspaper or I saw it on the TV news		I heard it on the radio		I saw it on the Internet	
		einem W im Fer	davon in /erbespot nsehen hren	einer Bı oder au	davon in roschüre uf einem gelesen	Ich habe davon in der Zeitung gelesen oder in den Fernsehnachrichten gehört		Ich habe davon im Radio gehört		Ich habe davon im Internet gelesen	
	%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5
	EU 27	29	0	5	1	17	2	3	1	2	0
	BE	33	-18	13	10	14	5	6	2	1	1
	BG	17	-11	4	2	11	-13	1	0	5	3
	CZ	5	3	5	2	14	-7	2	-1	4	0
	DK	10	1	2	0	38	6 8	5	1	2	1
	DE EE	5 11	0 -4	3	2 2	42 18	8 4	5 4	3 -1	5 9	3 -1
	IE	30	8	11	0	4	-12	7	-1 -2	2	1
	EL	39	7	8	3	12	0	1	1	5	4
	ES	42	9	4	1	13	1	3	2	0	-1
lŏ	FR	70	- 1	2	1	3	-2	5	1	1	0
O	IT	17	0	2	0	7	0	1	0	О	-1
<b>(</b>	CY	24	11	3	- 1	27	-7	1	- 1	2	1
	LV	16	1	2	-2	21	-6	2	-2	7	0
	LT	26	2	8	5	17	3	6	-3	8	1
	LU	27	-13	12	7	9	-4	6	1	0	- 1
	HU	13	3	2	1	9	-4	1	1	4	0
	MT	31	1	13	-5	14	4	4	- 1	4	3
	NL . –	9	1	6	-5	42	20	4	2	4	-2
	AT	5	2	4	1	27	4	2	1	4	3
	PL	19	-5	3	0	12	-6	3	0	4	2
	PT	24	13	3	-2 -1	13 1	4 -1	0	-2 0	1	0
	RO SI	20 6	-4 -6	0 6	- 1 3	20	- 1 -4	1 1	-2	2 6	1 2
#	SK	5	-6	4	3 1	19	0	2	-2 0	6	5
	FI	4	-0 1	5	1	35	0	2	0	4	2
	SE	9	5	4	0	35	-12	4	-2	2	0
	UK	19	6	14	-6	19	4	4	2	1	-2
	HR	26		4		10		1		3	

QE3b Où avez-vous d'abord obtenu cette information recommandant de ne pas prendre des antibiotiques quand cela n'est pas nécessaire ? (NE PAS LIRE – NE PAS MONTRER CARTE – UTILISER LA LISTE PRE-CODEE)

QE3b Where did you first get this information about not taking any antibiotics unnecessarily? (DO NOT READ OUT – DO NOT SHOW CARD – USE THE PRE-CODED LIST)

QE3b Wo oder von wem haben Sie zuerst gelesen oder gehört, dass Antibiotika nicht unnötigerweise eingenommen werden sollten? (NICHT VORLESEN - KARTE NICHT ZEIGEN - VORKODIERTE LISTE VERWENDEN - NUR EINE NENNUNG MÖGLICH)

	Autre		N:	SP
	Otl	ner	D	K
	Sons	stige	W	'N
%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5
EU 27	5	1	1	- 1
BE	2	-1	1	1
BG	2	1	3	0
CZ	2	0	1	0
DK	8	0	3	- 1
DE	7	2	2	-2
EE	9	0	1	- 1
ΙE	2	- 1	1	- 1
EL	2	1	0	0
ES	3	0	1	1
FR	2	-2	0	0
ΙΤ	2	- 1	1	1
CY	4	0	0	0
LV	2	-3	3	1
LT	3	-4	0	0
LU	4	2	0	- 1
HU	1	-2	1	1
MT	2	-5	0	- 1
NL	10	- 1	0	0
AT	6	3	1	1
PL	5	2	2	-2
PT	4	1	0	-4
RO	1	-1	2	1
SI	8	4	1	- 1
SK	3	1	0	- 1
FI	8	3	2	0
SE	12	5	4	2
UK	10	5	2	- 1
HR	2		1	

	illé par sionnel		ar famille ou nis	Conseillé via médias ou campagnes d'information			
	from a ssional		m family or nds	commu	Advice from media or communication campaigns		
	von einer kraft		n der Familie eunden	oder Komi	Hinweis durch Medien oder Kommunikation Kampagne		
EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5		
34	-3	4	- 1	56	4		
26	-2	4	2	67	0		
47	10	10	8	38	-19		
55	3	12	0	30	-3		
25	-8	7	0	57	9		
26	-11	4	-5	61	16		
34	3	11	-2	45	0		
40	7	3	0	54	-5		
31	-13	2	-3	65	15		
31	-10	3	-3	62	12		
16	3	1	0	81	- 1		
66	-1	4	2	27	- 1		
35	3	4	-6	57	3		
37	10	10	1	48	-9		
23	-6	9	2	65	8		
37	7	5	2	54	-10		
64	- 1	5	1	29	1		
28	4	4	0	66	2		
22	-14	3	-1	65	16		
47	-13	4	-2	42	11		
42	8	10	1	41	-9		
50	-10	5	0	41	13		
67	2	6	3	24	-5		
39	1	13	3	39	-7		
49	-2	12	2	36	0		
34	-5	6	-2	50	4		
25	4	5	-2	54	-9		
27	-8	4	0	57	4		
46		7		44			

QE3c Est-ce que l'information que vous avez reçue vous a fait changer d'avis à l'égard des antibiotiques ?

QE3c Did the information that you received change your views on antibiotics?

QE3c Hat sich durch diese Informationen Ihre Einstellung zu Antibiotika geändert?

		C	Dui	N	lon	N	SP
		Y	'es	1	No		DK .
			Ja	N	ein	V	VN
	%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5
	EU 27	36	0	62	0	2	0
	BE	38	-2	61	2	1	0
	BG	47	1	50	0	3	-1
	CZ	43	- 1	56	1	1	0
	DK	27	5	71	-5	2	0
	DE	29	2	70	-1	1	- 1
	EE	52	7	47	-7	1	0
	ΙE	49	-5	47	6	4	- 1
	EL	44	6	55	-7	1	1
	ES	33	-20	66	20	1	0
	FR	27	-2	72	2	1	0
	ΙΤ	52	15	45	-14	3	- 1
<b>(</b>	CY	60	9	40	-9	0	0
	LV	43	5	55	- 1	2	-4
	LT	51	1	44	- 1	5	0
	LU	32	-4	67	7	1	-3
	HU	46	11	54	-9	0	-2
	MT	53	6	44	-8	3	2
	NL	25	6	75	-6	0	0
	AT	35	-4	61	1	4	3
	PL	52	13	45	-8	3	-5
	PT	38	11	61	-11	1	0
	RO	55	2	25	-18	20	16
<b>(</b>	SI	50	7	47	-9	3	2
	SK	68	11	32	-10	O	- 1
	FI	21	-3	77	3	2	0
	SE	34	2	65	-1	1	- 1
	UK	30	-1	70	2	0	- 1
	HR	53		46		1	

QE3d De quelle manière cette information vous a-t-elle fait changer d'avis à l'égard des antibiotiques ? (PLUSIEURS REPONSES POSSIBLES)

QE3d In what way did this information change your views on antibiotics? (MULTIPLE ANSWERS POSSIBLE)

QE3d Inwiefern haben diese Informationen Ihre Einstellung zu Antibiotika verändert? (MEHRFACHNENNUNGEN MÖGLICH)

		toujours u lorsque vous vous avez	nsulterez ın médecin s pensez que besoin d'un otique	avec des antibiotiques		Vous n'irez plus chercher des antibiotiques sans la prescription d'un médecin		Vous ne conserverez plus les antibiotiques restants pour la prochaine fois où vous serez malade	
		doctor in when you	ays consult a situations think you antibiotic	You will no longer self- medicate with antibiotics		You will no longer take antibiotics without a prescription from a doctor		You will no longer keep left over antibiotics for next time you are ill	
		Sie werden immer einen Arzt konsultieren, wenn Sie das Gefühl haben, dass Sie Antibiotika benötigen		Sie werden nie wieder Selbstmedikation mit Antibiotika betreiben		Sie werden nie wieder Antibiotika einnehmen, wenn diese nicht vom Arzt verschrieben wurden		Sie werden keine ungebrauchten Antibiotika mehr aufbewahren, um diese bei der nächsten Erkrankung einzunehmen	
	%	EB	Diff. EB	EB	Diff. EB	EB	Diff. EB	EB	Diff. EB
		79.4	72.5	79.4	72.5	79.4	72.5	79.4	72.5
	EU 27	74	-2	17	-1	25	6	14	2
	BE BG	79 78	-2 -6	22 20	4 -14	26 15	6 -10	17 5	5 -8
	CZ	88	-0 7	14	-6	14	-10 -5	14	- <i>7</i>
	DK	70	3	28	1	53	-3	32	5
	DE	72	0	18	0	34	11	16	-4
	EE	64	-5	12	-3	33	-7	11	-7
	IE	71	-6	14	5	23	8	22	11
	EL	87	1	13	6	37	24	21	15
	ES	80	-3	13	-10	12	0	9	2
	FR	66	-4	18	-2	30	15	20	4
	ΙΤ	85	6	12	3	17	1	3	1
	CY	89	- 1	11	-12	28	-13	14	-7
	LV	53	4	22	-8	21	-5	14	0
	LT	58	1	30	12	33	1	10	2
	LU	74	-5	19	0	31	-2	17	-8
	HU	72	-7	10	4	25	2	18	12
	MT	67	-21 1	21	3	34 27	-1	16 9	0
	NL AT	43 78	0	12 16	6 -2	38	-8 21	29	1 11
	PL	76	3	14	-2 -1	38 18	1	6	3
	PT	71	5	4	-18	10	2	8	2
	RO	84	0	35	-4	29	-6	23	6
	SI	79	2	30	8	38	7	31	-1
•	SK	77	-2	18	5	15	-2	11	-2
	FI	46	-29	16	11	15	7	12	3
	SE	65	-8	13	-5	33	-2	20	0
	UK	63	-2	12	5	22	0	10	-5
	HR	85				19		17	

QE3d De quelle manière cette information vous a-t-elle fait changer d'avis à l'égard des antibiotiques ? (PLUSIEURS REPONSES POSSIBLES)

QE3d In what way did this information change your views on antibiotics? (MULTIPLE ANSWERS POSSIBLE)

QE3d Inwiefern haben diese Informationen Ihre Einstellung zu Antibiotika verändert? (MEHRFACHNENNUNGEN MÖGLICH)

		Autre (SF	PONTANE)	Aucun (SI	PONTANE)	N	SP	
		Other (SPO	NTANEOUS)	None (SPO	NTANEOUS)	DK		
		Andere (SPONTAN)		Nichts davor	n (SPONTAN)	WN		
	%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	
	EU 27	3	0	3	0	1	0	
	BE	2	1	1	-2	0	0	
	BG	1	0	2	2	2	2	
	CZ	О	- 1	2	2	0	-2	
	DK	6	3	1	1	0	0	
	DE	5	-3	3	0	0	0	
	EE	1	0	4	3	2	1	
	ΙE	3	0	4	2	1	1	
	EL	О	0	2	0	0	0	
	ES	2	- 1	3	2	0	0	
	FR	2	0	5	-2	2	1	
	ΙT	О	-2	1	0	0	- 1	
<b>(</b>	CY	4	0	О	0	1	1	
	LV	6	1	6	2	0	0	
	LT	6	0	2	1	0	- 1	
	LU	13	9	1	0	0	0	
	HU	1	0	0	0	0	-2	
	MT	5	5	1	- 1	1	1	
	NL	10	-2	15	2	2	-4	
	AT	2	1	О	0	0	0	
	PL	1	0	2	1	1	0	
	PT	О	0	15	12	2	- 1	
	RO	1	1	1	1	1	- 1	
<b>(</b>	SI	5	2	2	1	0	0	
	SK	1	0	0	0	0	0	
	FI	29	22	9	2	0	0	
	SE	14	6	3	-2	1	0	
	UK	10	6	6	1	2	2	
	HR	1		1		0		

QE4 Which of the following sources of information would you use in order to get trustworthy information on antibiotics? (MAX. 3 ANSWERS)

		Un m	édecin		nier\ Une mière	Une ph	armacie	Un h	ôpital	établisse	autre ement de nté	
		A do	octor	An	urse	A pha	ırmacy	A ho	spital	Another health care facility		
		Einer	Einen Arzt		Eine Krankenschwester		Einen Apotheker		Ein Krankenhaus		Eine andere Gesundheitseinrichtu ng	
	%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	
	EU 27	88	0	13	3	47	5	16	-2	5	0	
	BE	93	5	10	4	58	11	24	1	4	1	
	BG	84	-4	15	4	47	7	16	-5	3	-3	
	CZ	89	-6	16	- 1	48	1	21	1	5	0	
	DK	88	1	14	4	58	6	20	0	1	0	
	DE	91	0	5	- 1	55	7	8	0	2	-1	
	EE	85	1	18	6	50	9	9	-4	2	-1	
	ΙE	84	-5	21	-10	54	-8	14	-7	5	-1	
	EL	91	1	3	-5	41	11	34	5	7	2	
	ES	90	-3	11	4	32	4	13	-13	9	-7	
	FR	91	3	11	2	56	8	22	4	2	-1	
	IT	86	-3	8	4	30	5	15	-2	8	2	
	CY	95	- 1	11	2	42	9	28	-8	9	-3	
	LV	82	- 1	11	6	37	9	17	7	3	- 1	
	LT	81	-3	2	0	44	-4	12	1	5	-2	
	LU	91	-4	11	3	50	12	19	3	2	-1	
	HU	83	-5	12	0	54	8	15	- 1	3	-3	
	MT	93	-2	9	6	39	13	26	6	17	3	
	NL	82	-1	9	4	66	5	20	-3	4	0	
	AT	90	-3	13	4	64	7	20	-5	6	-2	
	PL	84	7	9	-2	33	4	10	0	2	-3	
	PT	90	0	17	10	38	9	18	-9	6	-2	
	RO SI	93 87	3 2	29 18	19 7	54	7 10	22 11	2 0	7 3	1 0	
(1)	SK SK	87 86	-5	22	3	60 58	10 8	11	<i>0</i> 3	3	-2	
	SK FI	78	-5 -3	22	<i>3</i> <i>2</i>	63	8 10	14	3 1	3	-2 -2	
	SE	76	-3 1	33	<i>5</i>	56	-3	21	-1	8	-2 -1	
	UK	86	-4	22	5 5	56	-3 4	19	- 1 -5	4	2	
			,		<u> </u>		,				-	
	HR	93		17		38		14		4		

QE4 Which of the following sources of information would you use in order to get trustworthy information on antibiotics? (MAX. 3 ANSWERS)

		La famille d	ou des amis		du Gouvernement tère de la Santé	NATIONAL DE SA UTILISER L	t de (INSTITUT ANTE PUBLIQUE – APPELATION NS CHAQUE PAYS)	
		Family o	r friends		from the National Ministry of Health	The Internet site from the (NATIONAL PUBLIC HEALTH INSTITUTE - USE APPROPRIATE NAMING IN EACH COUNTRY)		
		Familie oder Freunde			ler Regierung/des sministeriums	Internetseite des (NATIONALEN INSTITUTS FÜR ÖFFENTLICHE GESUNDHEIT)		
	%	EB	Diff. EB	EB	Diff. EB	EB	Diff. EB	
		79.4	72.5	79.4	72.5	79.4	72.5	
	EU 27	6	0	5	0	7	2	
	BE	4	0	3	-1	4	1	
	BG	11	1	3	-1	3	0	
	CZ	8	- 1	3	1	5	2	
	DK	6	-2	13	-6	29	4	
	DE	7	1	7	2	7	2	
	EE	8	-1	9	1	3	1	
	IE	5	-3	4	-1	4	-2	
	EL ES	5 2	-2 -2	3	1 2	2	1 2	
	FR	5	-2 -1	7	- 1	2	-1	
	IT	4	- <i>2</i>	2	-2	3	0	
	CY	7	3	7	-1	6	1	
	LV	12	0	1	-2	0	0	
	LT	10	-1	3	-1	4	2	
	LU	6	1	10	1	2	0	
	HU	11	4	2	1	3	1	
	MT	3	-5	4	1	7	7	
	NL	6	1	17	0	11	0	
	AT	9	-2	4	0	4	3	
	PL	6	-2	2	0	2	0	
	PT	3	1	3	1	3	2	
	RO	7	-3	2	0	1	- 1	
<b>—</b>	SI	9	2	2	-2	6	1	
	SK	11	-7	1	-2	3	0	
	FI	6	- 1	6	-2	4	0	
	SE	6	-2	8	0	17	- 1	
	UK	5	-1	7	2	23	6	
	HR	10		2		3		

QE4 Which of the following sources of information would you use in order to get trustworthy information on antibiotics? (MAX. 3 ANSWERS)

		Le site Internet sur la Santé Publique de l'Union européenne			Internet ayant la santé	Une organisation un établissemer indépendant de santé publique national		issement ndant de publique ional	
		The Internet site on Public Health from the European Union  Die Internetseiten über Öffentliche Gesundheit der Europäischen Union		Another health related Internet site		A Health Medical Encyclopedia		A national, independent public health body or organisation	
				Andere Internetseiten zum Thema Gesundheit		Eine Enzyklopädie zum Thema Medizin und Gesundheit		Eine nationale, öffentliche Gesundheitseinrichtu ng oder - organisation	
	%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5
	EU 27	2	0	5	1	3	-1	2	0
	BE	2	0	2	-1	3	0	1	- 1
	BG	2	0	6	3	1	-2	1	0
	CZ	2	1	5	2	5	0	3	0
	DK	3	0	12	2	13	2	4	2
	DE	3	0	8	2	3	0	2	1
	EE	1	0	4	- 1	4	0	1	0
O	ΙE	1	- 1	1	- 1	1	-2	1	-2
	EL	1	0	4	2	2	1	4	2
	ES	1	1	2	1	1	0	2	1
Q	FR	4	0	4	1	5	-1	2	0
	ΙΤ	1	- 1	1	0	1	-2	1	0
(5)	CY	10	4	8	4	4	- 1	3	1
	LV	1	- 1	3	0	6	- 1	1	- 1
	LT	2	0	5	1	5	-1	2	0
	LU	3	0	7	2	7	1	2	-1
	HU	1	0	3	1	4	2	3	0
	MT	2	1	5	2	2	1	3	3
	NL	4	1	15	4	6	-2	6	1
	AT	1	-1	4	-1	3	0	2	0
	PL	0	-1	3	-1	4	0	1	0
	PT	1	0 -1	2 4	1	1	0 -1	1	-2 0
	RO SI	0 2	0	5	2 3	7	- 1 3		0
	SK	1	-1	7	<i>3</i> <i>2</i>	4	-1	3 2	0
	FI	3	0	10	2	5	- 1 1	3	1
	SE	4	1	15	3	9	- 1	9	1
	UK	3	-1	3	0	2	- 1	1	-1
	HR	1	•	1		3		1	·
	1117	1		· ·		<u> </u>		<u> </u>	

QE4 Which of the following sources of information would you use in order to get trustworthy information on antibiotics? (MAX. 3 ANSWERS)

		Un journ maga gén	azine	Un magazine relatif à la santé		
		A newsp maga		A health related magazine		
		Eine Z oder Ze		Eine Ze zum T Gesur	hema	
	%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	
	EU 27	1	0	2	0	
	BE	1	- 1	3	0	
	BG	3	- 1	2	-3	
	CZ	3	1	5	2	
	DK	2	0	1	- 1	
	DE	2	0	4	1	
	EE	3	0	5	- 1	
$\mathbf{Q}$	IE	1	- 1	1	0	
	EL	1	-2	2	- 1	
	ES	1	0	1	1	
$\mathbf{Q}$	FR	1	0	4	1	
$\mathbf{Q}$	IT	1	0	2	0	
	CY	1	0	2	0	
	LV	4	-2	6	2	
	LT	4	- 1	5	-1	
	LU	2	- 1	2	-1	
	HU	3	1	6	2	
	MT	1	- 1	3	0	
	NL	3	0	2	-1	
	AT	1	- 1	3	0	
	PL	1	- 1	2	-1	
	PT	0	-2	1	0	
	RO	1	1	2	0	
<b>(</b>	SI	2	-2	4	0	
	SK	3	- 1	8	-1	
	FI	4	2	6	2	
	SE	2	- 1	2	-1	
40	UK	0	- 1	0	- 1	
	HR	2		2		

Autre (SF	PONTANE)	d'inform les antik (SPON	erche pas ation sur piotiques ITANE)	NSP		
	her ANEOUS)	for inforr antib	t looking mation on piotics ANEOUS)	DK		
	stiges NTAN)	nach Info zu Ant	he nicht rmationen ibiotika NTAN)	WN		
EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	
1	0	3	0	0	0	
1	0	1	-6	О	- 1	
0	- 1	10	6	1	1	
0	0	1	1	1	1	
0	-1	1	0	0	0	
0	0	2	1	0	0	
1	0	2	-2	1	-2	
1	1	2	0	1	- 1	
0	0	2	0	0	0	
1	1	0	0	1	1	
1	<b>1</b> 1		-2	0	0	
0	O -1		0	1	0	
0	-2	1	1	0	- 1	
2	1	6	2	1	1	
2	0	3	2	3	1	
2	1	1	1	0	- 1	
1	1	6	0	0	0	
0	-1	1	1	0	0	
2	1	1	0	0	0	
0	0	5	3	0	0	
1	0	9	-6	1	1	
0	0	2	0	0	- 1	
0	- 1	2	2	1	- 1	
2	- 1	3	-3	0	0	
1	0	3	3	0	0	
2	0	0	- 1	0	0	
2	1	1	1	0	0	
1 0		5	4	0	- 1	
0		2		0		

QE4 Which of the following sources of information would you use in order to get trustworthy information on antibiotics? (MAX. 3 ANSWERS)

		Professionnel ou établissement de santé Professional or health care facility			Sources non-reliées à la Sites Internet ayant tra santé à la santé			Sources off-line ayant trait à la santé	
				Non-health related sources		Health related Internet sites		Health related offline sources	
		Fachkräfte oder Gesundheitseinrichtungen		Sources non-reliées à la santé		Internetseiten zum Thema Gesundheit		Andere Quellen zum Thema Gesundheit	
	%	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5	EB 79.4	Diff. EB 72.5
	EU 27	94	1	7	-1	16	2	5	-1
Ŏ	BE	97	6	6	0	10	- 1	5	- 1
	BG	88	-4	14	0	12	1	3	-5
	CZ	94	-5	11	1	13	4	9	2
	DK	95	3	7	-2	50	4	14	1
	DE	96	1	9	1	22	5	6	0
	EE	91	3	11	- 1	16	1	9	-1
	ΙE	93	- 1	6	-4	9	-4	3	0
	EL	96	2	6	-3	8	4	3	-2
	ES	96	-2	3	- 1	6	3	2	1
	FR	95	3	6	0	16	1	8	- 1
	IT	97	3	5	- 1	7	-2	2	-3
	CY	97	- 1	8	3	24	6	5	-2
	LV	87	-2	15	-3	5	-3	11	0
	LT	87	-5	14	- 1	12	1	9	-2
	LU	95	-2	7	- 1	21	5	9	0
	HU	90	-2	13	4	8	2	9	3
	MT	97	0	4	-6	16	9	5	1
	NL	94	1	8	1	40	5	7	-4
	AT	94	-3	9	-3	13	2	5	0
	PL	88	8	7	-2	6	- 1	6	0
	PT	96	0	4	0	8	3	2	0
	RO	97	3	7	-3	7	1	4	0
	SI	93	3	11	1	14	3	11	4
	SK	94	-2	14	-7	11	0	12	-2
	FI	94	2	10	1	21	1	10	2
	SE	94	0	7	-3	36	0	11	- 1
	UK	92	-3	6	-1	32	6	3	-1
	HR	97		11		7		4	