

INTRODUCTION

- Aim of European Antibiotic Awareness Day (EAAD): Raise awareness and change behaviour towards antibiotic use
- Additional aim of EAAD 2014: Measure the impact on the engagement of public and healthcare professionals → For that reason, an online pledge system was created
- Purpose of Antibiotic Guardian (AG) campaign:
 - Increase engagement with the rising threat of AMR
 - Concrete personal and collective action to help keep antibiotics active
 - Provide a system to measure behaviour change
- First example of online pledge system to improve AMR related knowledge and behaviour amongst healthcare professionals and the general public
- Total number of Antibiotic Guardians (AGs) 2014: 11,833
- Aim of current evaluation: Look at changes in knowledge and behaviour



METHODS

Questionnaire

- Online questionnaire: Evaluation of the Antibiotic Guardian campaign 2014
- Sent via e-mail to 9016 Antibiotic Guardians who consented for follow up
- Launch of the survey: 3rd of February 2015
- Survey included questions on:
 - Type of pledge
 - Motivation
 - Change in behaviour (acting according to pledge)
 - Knowledge acquired
 - Clarity of promotion materials
 - Demographics (age, sex, health-related profession, use of social media)
- The e-mail included an invitation to participate in focus groups/in depth interviews

Statistical Analysis

- Statistical Software: STATA 13.1
- Questions analysed as the outcomes of interest:
 - **Change in behaviour:** "Since you became an Antibiotic Guardian, have you acted in line with your pledge?"
 - **Change in knowledge:** "After becoming an Antibiotic Guardian, do you feel that you have acquired more knowledge on what antibiotic resistance is?"
 - **Promotion of the AG campaign:** "Indicate your agreement with the statement: "I think the AG campaign is well promoted""
- Logistic regression models, adjusted for age, sex and pledge group used to estimate associations between outcomes and AG characteristics
- Distribution of demographic variables was analysed
- Multiple imputation model for missing values was conducted to take into account missing data

RESULTS

- 2478 AGs responded: 27.5% response rate (68% healthcare professionals – 32% members of public) → similar to proportions at total population of 11,833 AGs (figure 1)
- 76.9% were connected to the healthcare system
- 96.3% had prior knowledge of AMR
- 73.5% were female and 27.5% were between 45-54 years old

Behaviour (table 1)

- 43.9% remembered completely the meaning of their pledge
- 63.4% reported always acting according to their pledge
- Members of public more likely to act according to their pledge than healthcare professionals (OR=3.63, CI: 2.89-4.55)
- Respondents without positive pre-campaign pledge behaviour less likely to have positive post campaign pledge behaviour (OR=0.24, CI: 0.16-0.35)
- AGs that remembered the pledge more likely to have positive post campaign behaviour (OR=1.97, CI: 1.63-2.37)

Knowledge (table 2)

- 44.5% acquired more knowledge about AMR post campaign
- Sense of personal responsibility towards tackling AMR increased by 12.2% post campaign
- People confused about AMR prior to the AG campaign acquired more knowledge after the campaign (OR =3.10, CI: 1.36 – 7.09)
- Respondents without pre-campaign knowledge more likely to acquire knowledge on AMR post campaign (OR=4.20, CI: 2.04 – 8.66)
- Members of the public less likely to have acquired more knowledge post campaign than healthcare professionals (OR= 0.80, CI: 0.66 – 0.97)

Promotion

- 61.7% agreed to different extents that the AG campaign was well promoted
- 56.7% seemed to think that the website itself was the best source of information but more than half of AGs have not seen most promotion materials

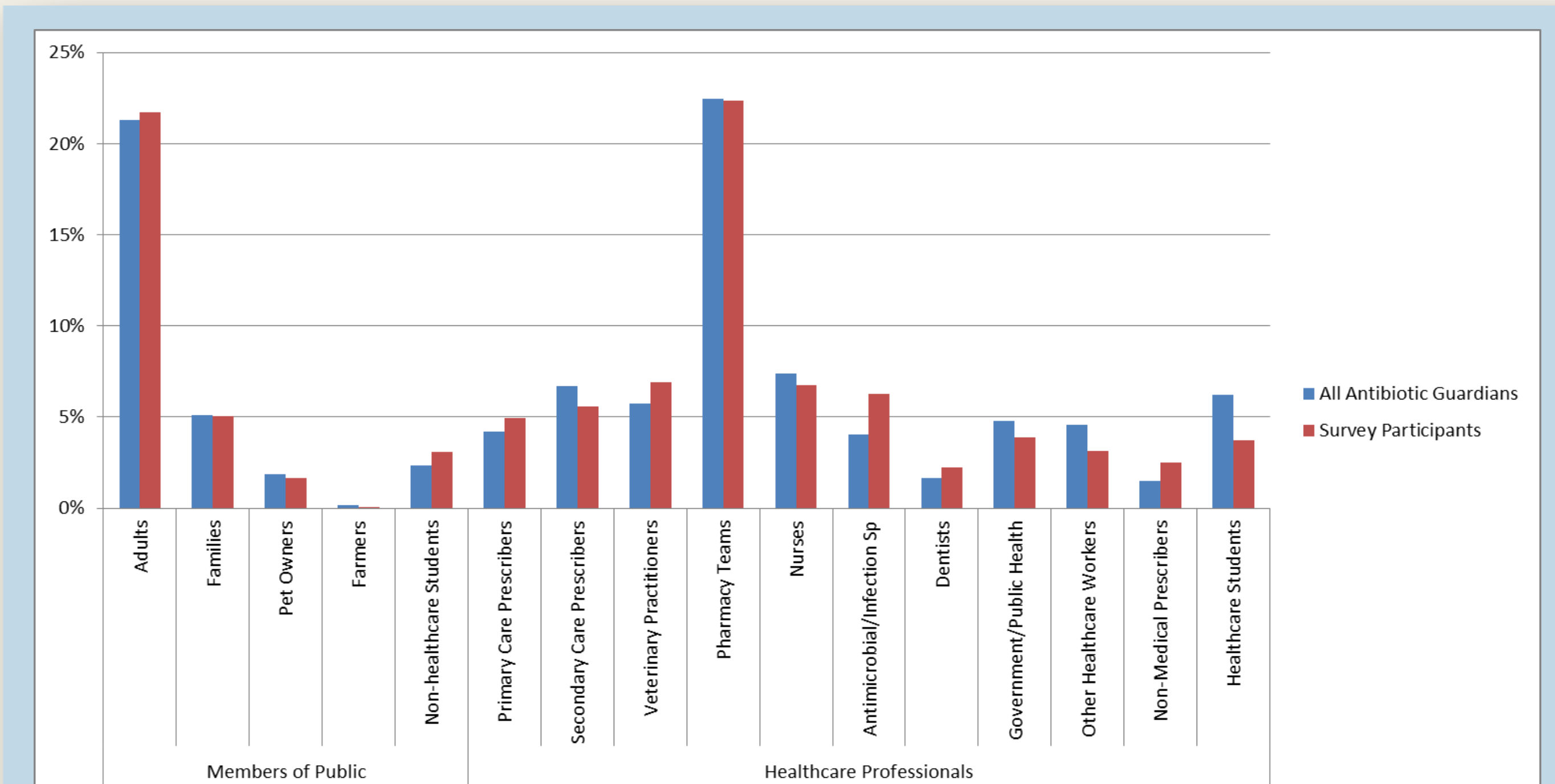


Figure 1: Distribution of AGs and survey participants among Members of public and Healthcare professionals

Covariate	N	Crude OR (95% CI)	Adjusted OR (95% CI)
Pledge group			
Healthcare Professionals	1696	1.0 (ref)	1.0 (ref)
Members of Public	782	3.02 (2.48 – 3.69)	3.63 (2.89 – 4.55)
Act according to pledge before becoming AG			
Yes	2287	1.0 (ref)	1.0 (ref)
No	111	0.31 (0.22 – 0.45)	0.24 (0.16 – 0.35)
Remember the pledge			
Completely	1087	1.64 (1.38 – 1.94)	1.97 (1.63 – 2.37)
Somewhat	1286	1.0 (ref)	1.0 (ref)
No	105	0.24 (0.16 – 0.37)	0.23 (0.14 – 0.36)
Age			
<34 years old	596	0.94 (0.77 – 1.13)	0.86 (0.71 – 1.06)
35-64 years old	1548	1.0 (ref)	1.0 (ref)
>64 years old	114	1.54 (1.0 – 2.37)	1.11 (0.68 – 1.79)
Sex			
Female	1657	1.0 (ref)	1.0 (ref)
Male	598	0.98 (0.81 – 1.19)	1.09 (0.89 – 1.33)

Table 1: Crude and Adjusted Odds Ratios from ordinal logistic regression model for associations with AGs acting according to their pledge

Covariate	N	Crude OR (95% CI)	Adjusted OR (95% CI)
Confusion on what AMR is before the campaign			
Yes	34	3.81 (1.71 – 8.48)	3.10 (1.36 – 7.09)
No	2399	1.0 (ref)	1.0 (ref)
Prior knowledge on AMR			
Yes	2386	1.0 (ref)	1.0 (ref)
No	44	3.66 (1.84 – 7.27)	4.20 (2.04 – 8.66)
Pledge group			
Healthcare Professionals	1696	1.0 (ref)	1.0 (ref)
Members of Public	782	0.85 (0.72 – 1.02)	0.80 (0.66 – 0.97)
Age			
<34 years old	596	1.13 (0.94 – 1.37)	1.12 (0.92 – 1.35)
35-64 years old	1548	1.0 (ref)	1.0 (ref)
>64 years old	114	0.78 (0.53 – 1.15)	0.88 (0.58 – 1.33)
Sex			
Female	1657	1.0 (ref)	1.0 (ref)
Male	598	0.92 (0.76 – 1.11)	0.89 (0.73 – 1.08)

Table 2: Crude and Adjusted Odd Ratios from logistic regression model for associations with knowledge on AMR after the AG campaign

CONCLUSIONS

- Good response of an overall representative sample
- Effective in achieving positive changes in behaviour and an increase in knowledge amongst people with prior awareness of the topic
- Less successful in engaging people without previous professional or personal experience of AMR
- Majority thought the campaign was well promoted but most materials were not seen

RECOMMENDATIONS

- Regular communication with pledgees via e-mails or newsletters to remind their pledge and provide information
- Engage wider members of public → initiatives for alternative promotion methods to get the public aware and engaged with the campaign
- Adopt the lessons learnt from other similar campaigns:
 - Allow pledgees to create personalised pledges
 - Set pledges that are easier to achieve
 - Get individuals to make pledges in public
- Evaluations should be built into the design of future campaigns → capture pre and post campaign effects

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