Two Years of National Public Campaigns to Promote Appropriate Use of Antibiotics in the Community In Belgium

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ABSTRACT

Background: Ambient consumption in the community is high in Belgium (4 th in Europe in 55-57 [Lancet 357:1851, 2001]) and patients demand an important determinant (Papers Elsio, 45-161, 2002).

Methods: 2 successful, 3-month (Dec-Feb) campaigns were launched in 2000-2001 and 2001-2002 with 3 key messages ("Use Antibiotics Frequently But Better"). "Save antibiotics, they may save your life." "Talk to your Doctor." "Talk to your Pharmacist" using TV, radio, brochure, and folders. Impact was evaluated on the public: pre and post season survey to have an overall interview in 2000 and 2001 (n=1041); GPS (post campaign phone interview in 2001 and 2002); GPS personal visits (2001 and 2002); GPS telephone survey controlling for the season's variation of influenza-like illnesses (ILI); (c) cost-effective analysis (CEA).

Results: The campaign had a high visibility (public, 75% of GPS, 18% and 71%); both the public (77% and 97% at p<0.07) but not in the GP's (0.9)), had accepted to be more restrictive for antibiotic use. Expectation for antibiotics decreased for acute bronchitis, flu, tonsillitis, otitis media and cold (p<0.06). Antibiotics sales decreased in the second campaign (17% and 9% at p<0.09 but not in the first campaign). The costs for the two campaigns about 5,000,000 (due to Social Security savings), and 5,000,000 (p<0.05 for Social Security).

Conclusions: These repeated, nationwide, public-targeted interventions resulted in change of patient's expectations but not in antibiotic prescribing. These messages and educational efforts towards the public appear to have a limited and short-lived impact on prescribing and may need to be complemented by other actions.

INTRODUCTION

Antibiotics have dramatically reduced illness and death from infectious diseases. Bacteria, however, have shown a remarkable capacity to quickly become resistant to antibiotics.

We are now facing a situation where virtually all bacterial pathogens are becoming resistant to currently used antibiotics, leading to clinical failures. Moreover, vaccine and resistance seems now to emerge as linked phenotypes. Resistance of some typical human pathogen is correlated with the level of antibiotic use in the community. The latter varies widely among European countries, which suggests that antibiotic prescribing and consumption is only remotely related, in some countries, to what could be considered as appropriate use.

Improper demand of antibiotics by doctors over estimation of patients' need for antibiotics may be a driving factor in antibiotic overconsumption. Educational efforts appear, therefore, of central importance.

To alleviate the pressure placed on the physicians by the public and to promote patient-pharmacist communication, two successful, nation-wide, public-targeted interventions were therefore organized in Belgium during the winters of 2000-2001 and 2001-2002.

METHODS

Target groups:

- providing the public with a better understanding of the rational use of antibiotics and education such as common cold, acute bronchitis, or flu.
- to increase public awareness of the consequences of resistance of bacteria.
- to discuss the difference between antibiotic and anti-infective pharmaceuticals on the needs of appropriate antibiotic use.
- to promote the reduction of antibiotic use.

Impact on the public:

Main observations resulting from the surveys of the public (same message campaign and post campaign the first campaign (2000-2001)). All values and percentages:

- **General perception of the campaign**: 
  - 74% of the public remembered "Use Antibiotics Frequently But Better", 71% for the second campaign.
  - "We need antibiotics when it is really needed" (67% in the first campaign; 60% in the second campaign).
  - "Antibiotics should be taken only when really needed" (59% in the first campaign; 54% in the second campaign).
  - "We should take antibiotics more frequently" (12% in the first campaign; 7% in the second campaign).
  - "We should use antibiotics less frequently" (30% in the first campaign; 36% in the second campaign).
  - "I do remember the campaign" (66% in the first campaign; 70% in the second campaign).
  - "I talked to my doctor" (26% in the first campaign; 22% in the second campaign).
  - "I talked to my pharmacist" (25% in the first campaign; 23% in the second campaign).

- **Material number target channel**: 
  - Booklets 600,000
  - Booklets 50,000
  - Booklets 30,000
  - Booklets 20,000

- **Communication channels**: TV, radio, media, articles in newspapers, magazine articles, posters, leaflets, and website.

- **Assessment of the impact if the campaign**
  - GPS pre and post campaign survey 6 months after the end of the first and second campaign.
  - Random selection of 400 GPS representative of all Belgian general practitioners in Belgium (GPs). 
  - Monthly sales data of all antibiotics in the ATC (Anatomical Therapeutic Chemical) classes R01 for the period of the campaign (2000-2001). 

- **Impact on the public**: 
  - Expected for antibiotics significantly decreased for acute bronchitis, flu, tonsillitis, otitis media and cold (p<0.06). 
  - Overall recollection "I do remember the campaign": 66% and 70% in the first and second campaign respectively.
  - "I talked to my doctor" (26% and 22% in the two campaigns).

- **Impact on the GP's**: 
  - Expectation for antibiotics significantly decreased for acute bronchitis, flu, tonsillitis, otitis media and cold (p<0.06).
  - "I talked to my doctor" (26% and 22% in the two campaigns).

- **Materials used and targeted**
  - Monthly sales data of all antibiotics in the ATC classes R01 for the period of the campaign (2000-2001).
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CONCLUSIONS AND QUESTIONS

The campaigns had a high visibility (public, 75% of GPS, 18% and 71%); both the public (77% and 97% at p<0.07) but not in the GP's (0.9)), had accepted to be more restrictive for antibiotic use. Expectation for antibiotics decreased for acute bronchitis, flu, tonsillitis, otitis media and cold (p<0.06). Antibiotics sales decreased in the second campaign (17% and 9% at p<0.09 but not in the first campaign). The costs for the two campaigns about 5,000,000 (due to Social Security savings), and 5,000,000 (p<0.05 for Social Security).

Conclusions: These repeated, nationwide, public-targeted interventions resulted in change of patient’s expectations but not in antibiotic prescribing. These messages and educational efforts towards the public appear to have a limited and short-lived impact on prescribing and may need to be complemented by other actions.