

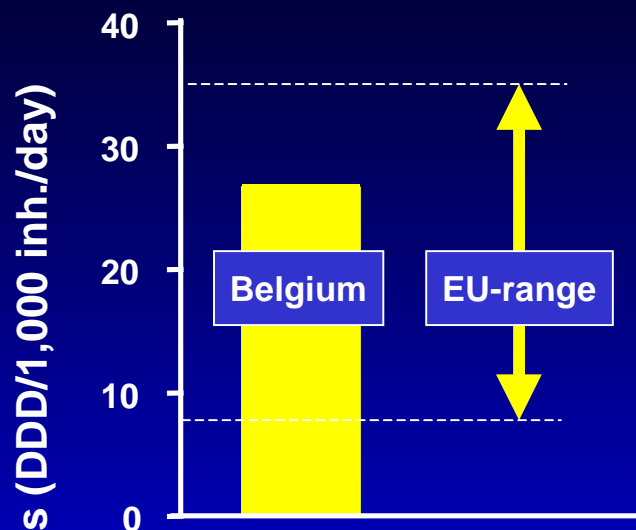
# Evaluation of the Impact of a Public Campaign for a More Rational Use of Antibiotics in Belgium

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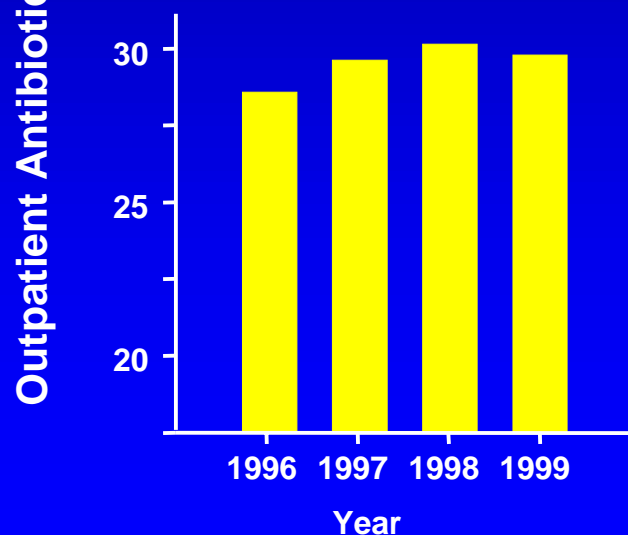
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- **Universiteit Gent, Ghent;**
- **Universitaire Instelling Antwerpen, Antwerp;**
- **Question Santé asbl, Brussels;**
- **Belgian Institute of Pharmacoepidemiology, Brussels;**
- **Université Catholique de Louvain, Brussels;**
- **Katholieke Universiteit Leuven, Louvain;**

**BELGIUM**

# Background (1 of 2)



- Belgium (10 mill. inhab.) has a larger AB consumption than most EU countries  
(data of 1997 according to Cars et al., Lancet 357:1851, 2001);



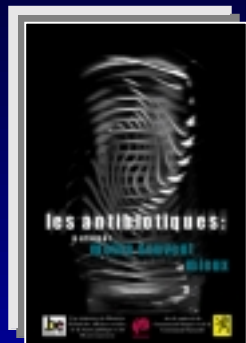
- this consumption has remained constantly high over the 1996 - 1999 period  
(data from the Belgian Institute of Pharmacoepidemiology [IPhEB-IFEB])

## Background (2 of 2)

A 2-months national **multimedia** educational campaign was launched in Nov. 2000 to inform the public about the risks associated with the overconsumption and misuse of antibiotics

- **position paper** in a monthly professional official publication (*Folia Pharmacotherapeutica*)
- **letter** to GPs and pharmacists,
- 500,000 **booklets** and 200,000 **leaflets**
- 500 **prime time 30sec TV spots** and 900 **radio broadcasts**,
- 2 **WEB sites**
- **press conference**,

**Budget :**  
**450,000 Euros**  
(approx. 400,000 US \$)



All materials still available at <http://www.antibiotiques.org>

# Aims of the campaign

to objectively assess the impact of an educational campaign about rational use of antibiotics on

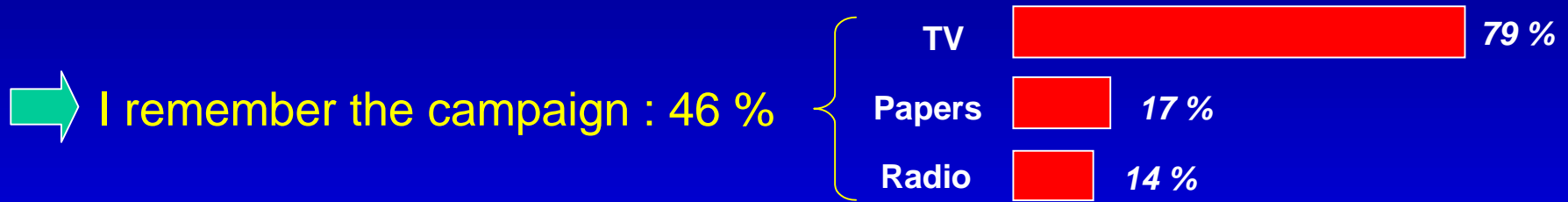
- the awareness of the public;
- the appreciation of this effort by the GPs;
- AB prescription at the community level.

# Awareness of the public (1 of 3)

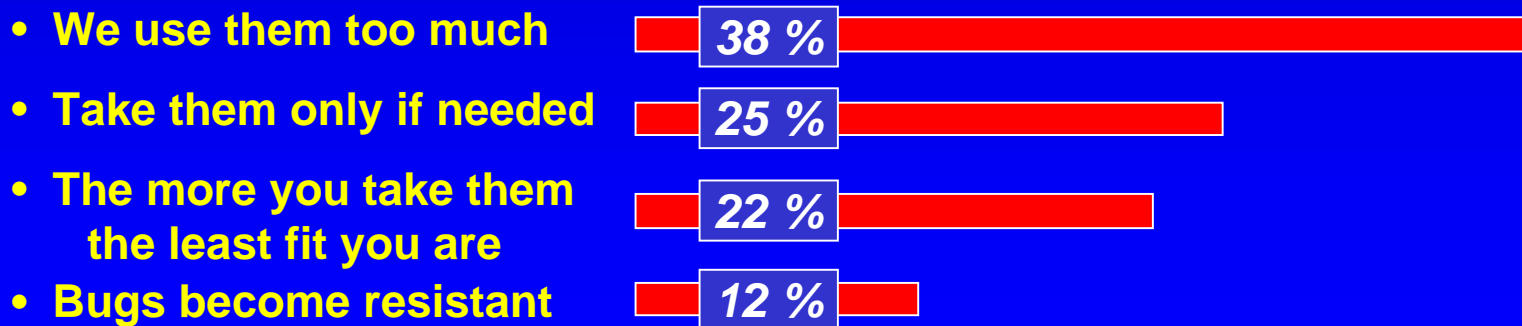
Method :

- face-to-face interviews (n=1,015; representative of pop. > 14 y.)
- 1 month after end of the campaign

Main and most salient results concerning direct impact :



➔ I remember the main message was



# Awareness of the public (2 of 3)

Main and most salient results concerning AB expectations :  
(in comparison with a similar pre-campaign survey)

Do you expect / ask for an antibiotic in case of :



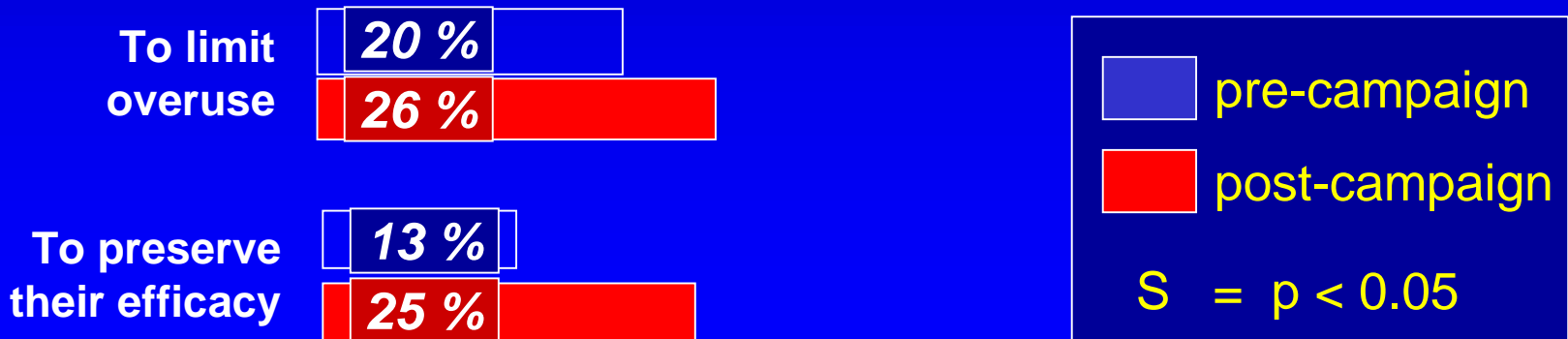
# Awareness of the public (3 of 3)

Main and most salient results concerning individual AB use :  
(in comparison with a similar pre-campaign survey)

Do you agree to use less AB in agreement with your GP ?



Why ?

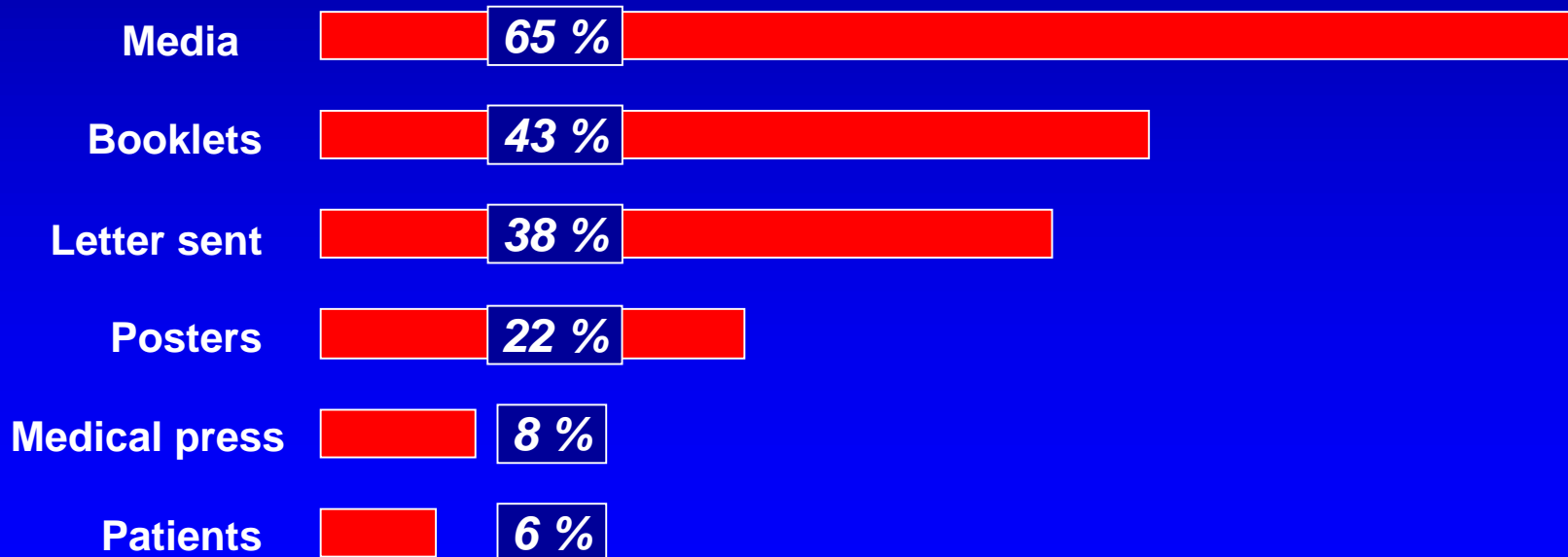


# Appreciation of the General Practitioners (1 of 3)

## Method :

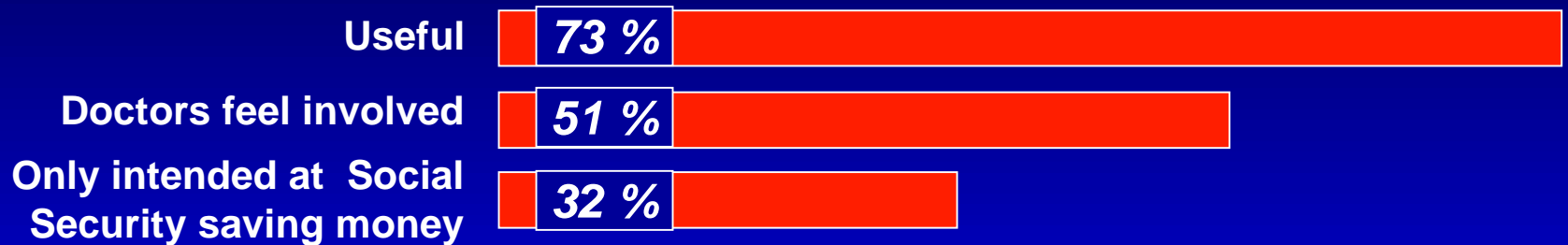
- telephone interviews (n=400; representative of all regions)
  - 3 months after end of the campaign
- 

Impact : 100 % GPs remember the campaign ... and have noticed it through:

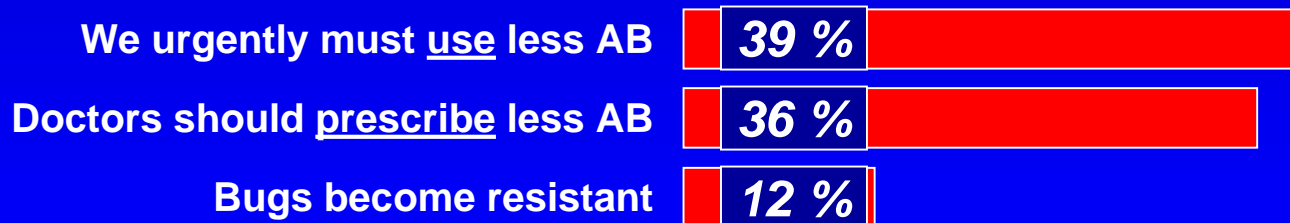


# Appreciation of the General Practitioners (2 of 3)

What do they think about the campaign ...

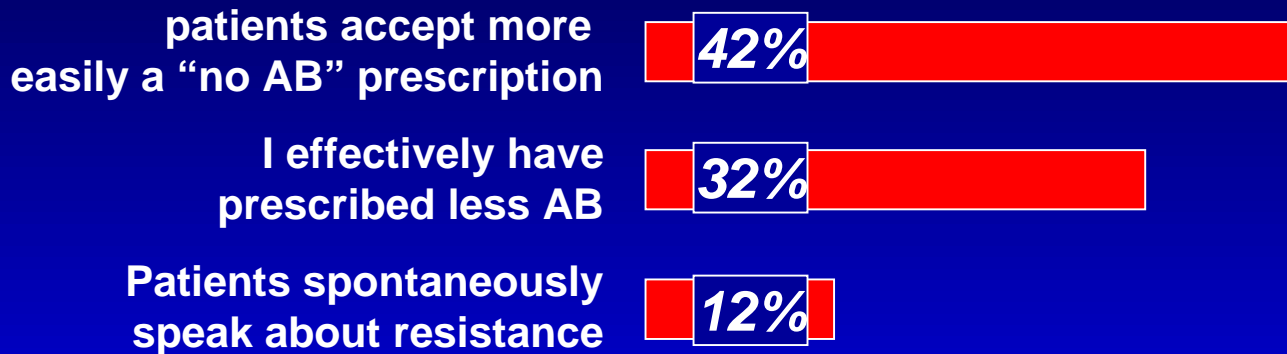


What do they remember ...



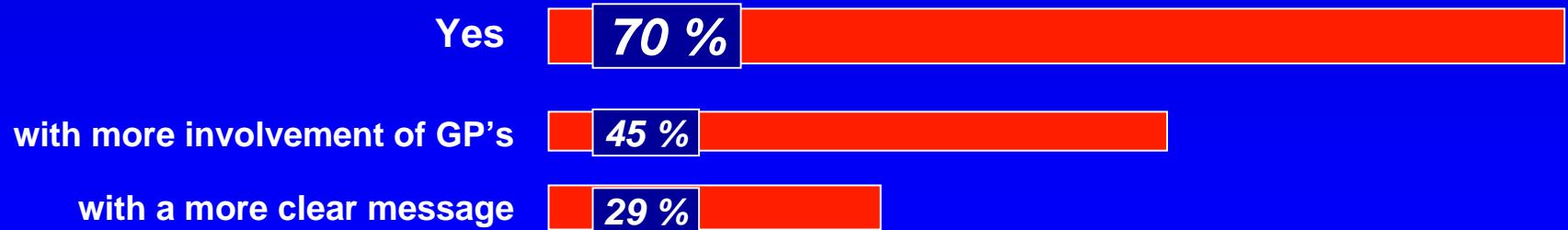
# Appreciation of the General Practitioners (3 of 3)

**30 % of the GPs have seen changes in their practice**



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**Should the campaign be repeated next year ?**

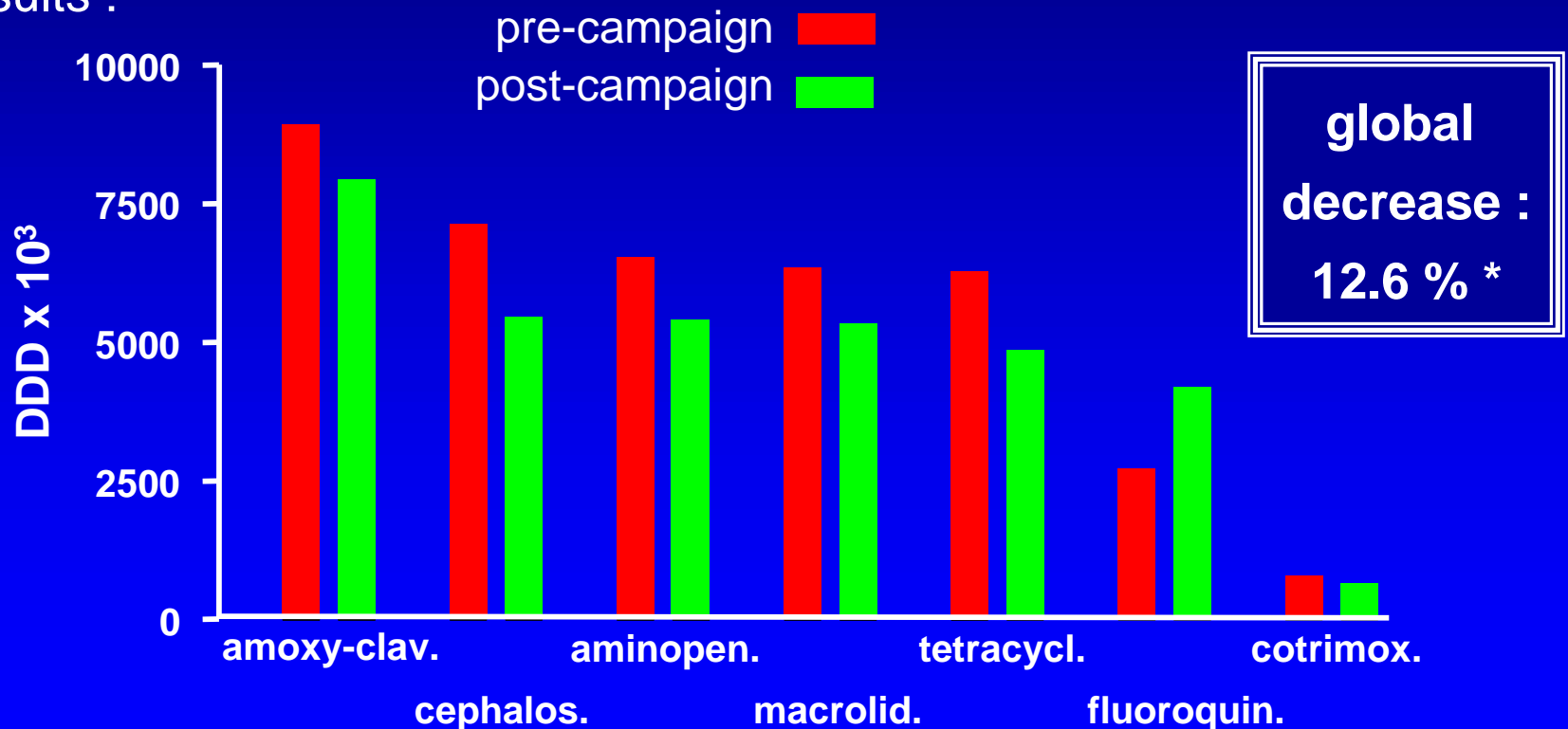


# Changes of AB sales in the community (1 of 3)

1st method (descriptive approach) :

- record of AB sales (DDD; class ATC J01) in retail pharmacies from Dec. 2000 through Mar. 2001 (Belgian Pharmaceutical Association [APB]; 78 % exhaustivity)
- comparison with the same period in 1999-2000

Results :



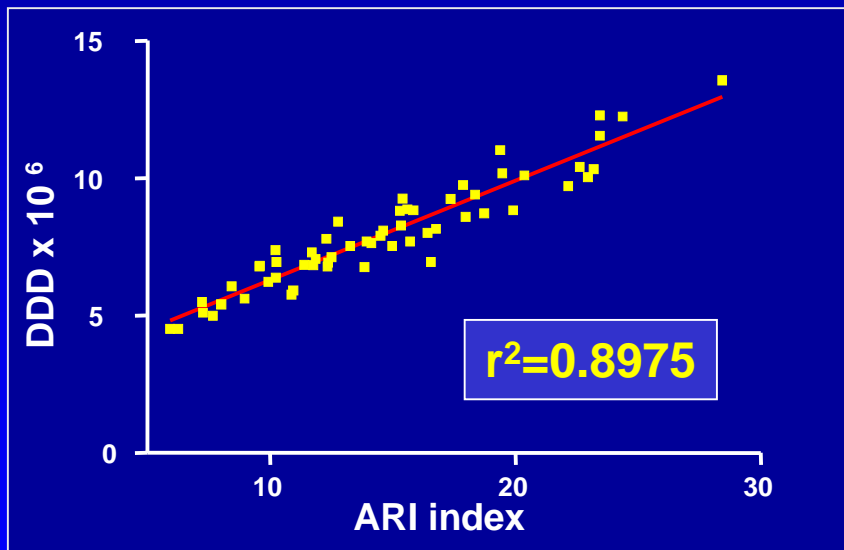
\* accounting for 97.7 % of total antibiotic outpatient sales

# Changes of AB sales in the community (2 of 3)

2d method : AutoRegressive Integrated Moving Average model (ARIMA)

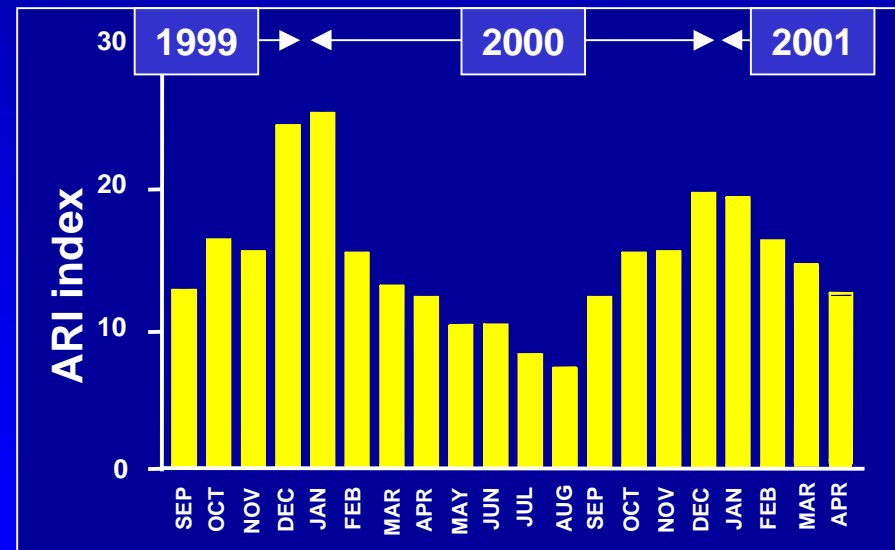
- pre-campaign data (1996 - Nov 2000) to examine the influence of seasonal variations of Acute Respiratory Infections (**ARI**) incidence on antibiotic use
  - establishment of predictions for Dec 2000 - Mar 2001 (campaign period)
- ➔ **Deviations from predicted values will assess the effectiveness of the campaign**

**Correlation between monthly DDD and ARI index (1996- nov. 2000)**



➔ **Each variation of 1 ARI unit causes an increase of 364,035 DDD [298,202-429,868]**

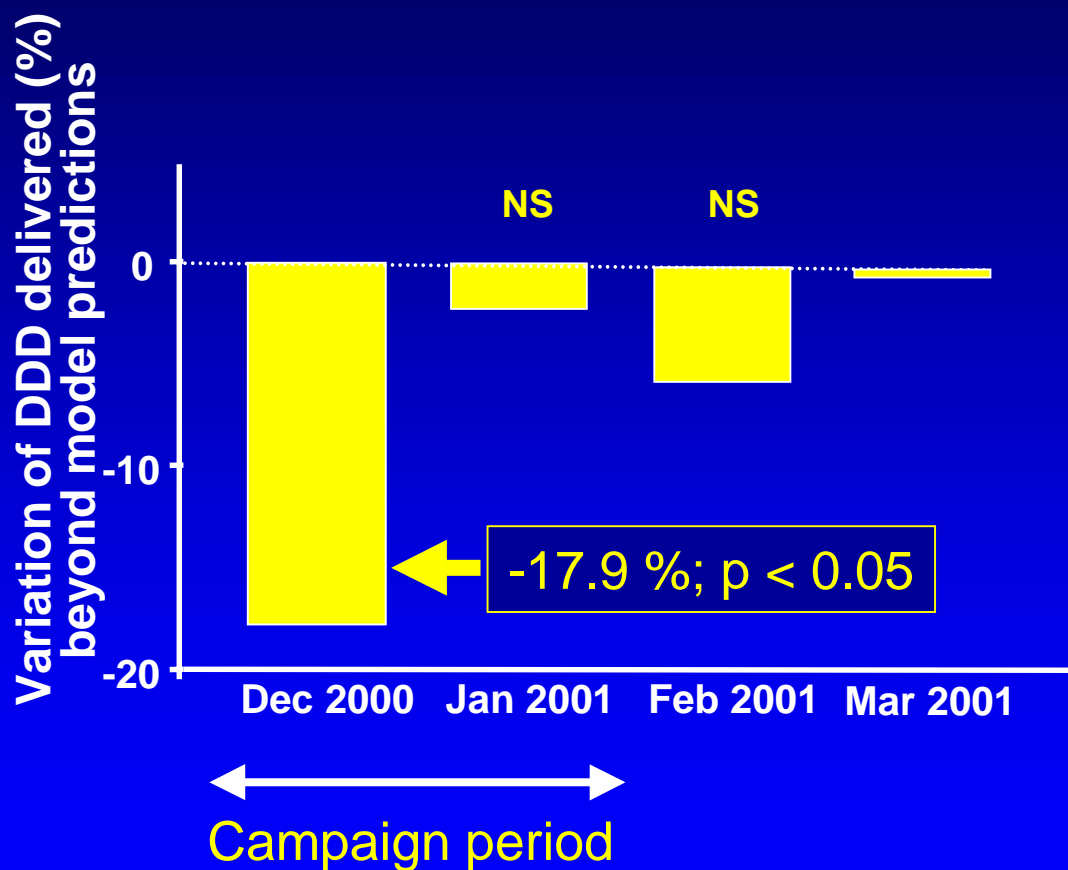
**Variation of ARI index during the Sep 1999 - Apr 2001 period**



➔ **There were less ARI during the campaign than during the previous winter**

# Changes of AB sales in the community (3 of 3)

**Results :** monthly deviations of AB sales from predicted values during the campaign period and the next two months



- the campaign caused an immediate and highly significant decrease of AB sales
- this decrease
  - cannot be explained by the lower incidence of ARI in 2000-2001
  - is very transient
- the overall specific (non ARI-related) 4-months decrease (5.6 %) remains significant ( $p = 0.039$ )

# Conclusions

- The campaign
  - improved the awareness of the public, made it alert to the problem of bacterial resistance, and reduced requests for antibiotics
  - was judged globally positive by GPs
  - reduced transiently AB prescribing
- Media (mostly TV) were the most instrumental mean in attracting attention of both the public and GPs
- GPs' awareness of AB resistance in their daily practice remains low

# Acknowledgments

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- Mr C. Decoster, Chief Medical Officer, Federal Ministry of Health
- The Belgian Antibiotic Policy Coordination Committee (BAPCOC)
- The French-speaking Community of Belgium\*
- The Flemish-speaking Community of Belgium\*
- Scientific Institute of Public Health “Louis Pasteur”
- *Société Belge d’Infectiologie et de Microbiologie Clinique / Belgische Vereniging voor Infectiologie en Klinische Microbiologie*



\* responsible for preventive medicine activities at the community level

All campaign materials, this set of slides, and additional information is available for download at  
<http://www.antibiotiques.org/english> or <http://www.red-antibiotica.org/english>