

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

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This set of slides was intended for presentation as oral communication on Saturday Sept. 22, 2001 at the "Late Breaker" Session #1 (slide session 023: *Antibiotic Resistance and Outbreaks*) of the 41st *Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC)*, Chicago, Ill., organised by the *American Society of Microbiology (ASM)*.



Due to the exceptional circumstances, ASM has postponed this meeting, and therefore this presentation, to December 17th, 2001.

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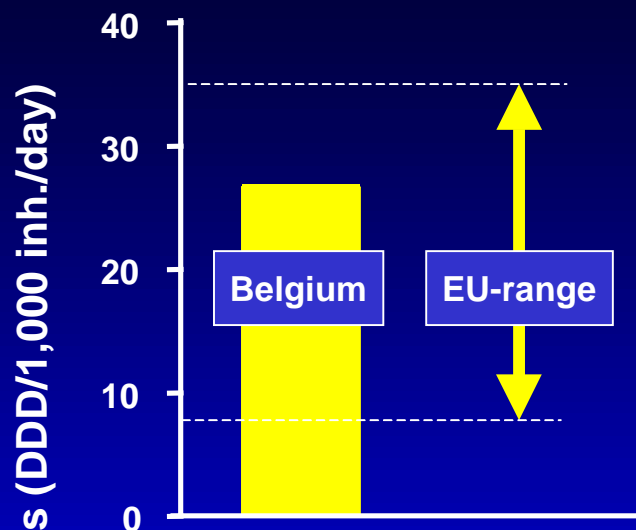
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- Ministries of Social Affairs, Public Health & Environment;
- Universiteit Gent, Ghent;
- Universitaire Instelling Antwerpen, Antwerp;
- Question Santé asbl, Brussels;
- Belgian Institute of Pharmacoepidemiology, Brussels;
- Université Catholique de Louvain, Brussels;
- Katholieke Universiteit Leuven, Louvain;

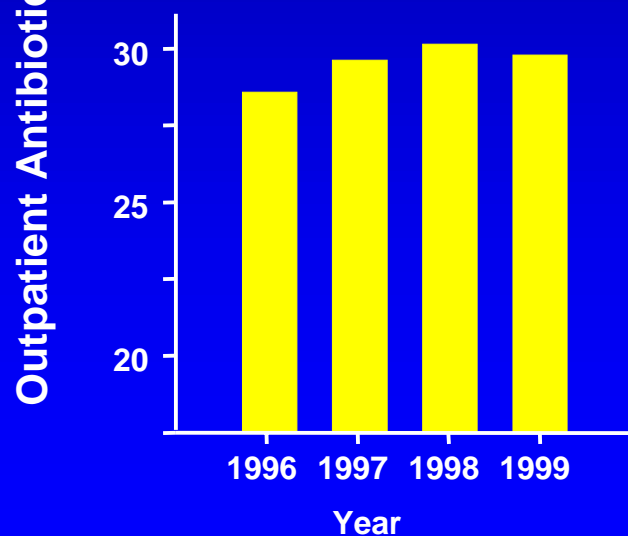
BELGIUM



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

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

Budget :
approx.
400,000 US \$



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

Aims

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

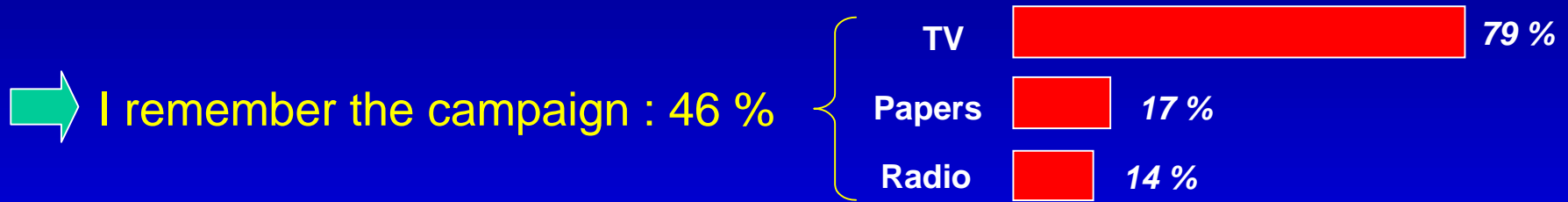
- the awareness of the public;
- the appreciation of this effort by the GPs;
- AB prescription at the community level.

Awareness of the public

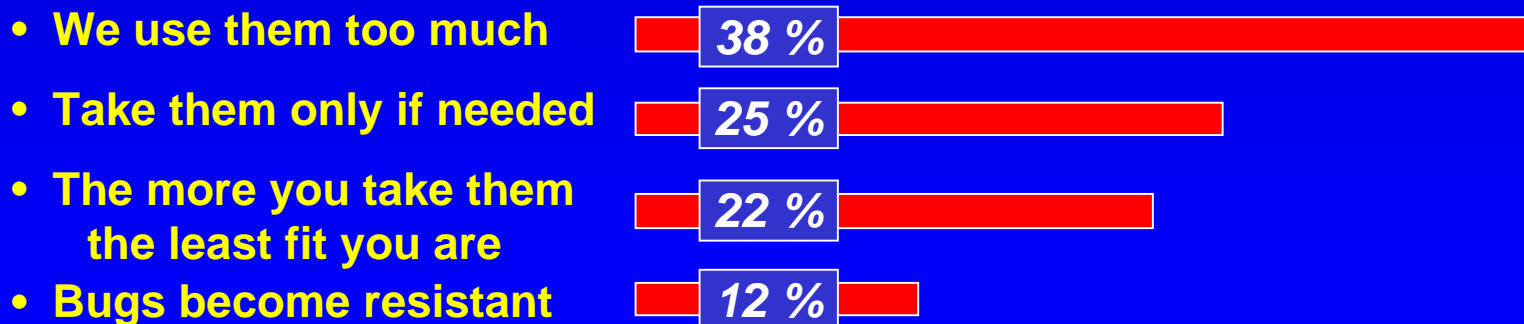
Method :

- 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 :



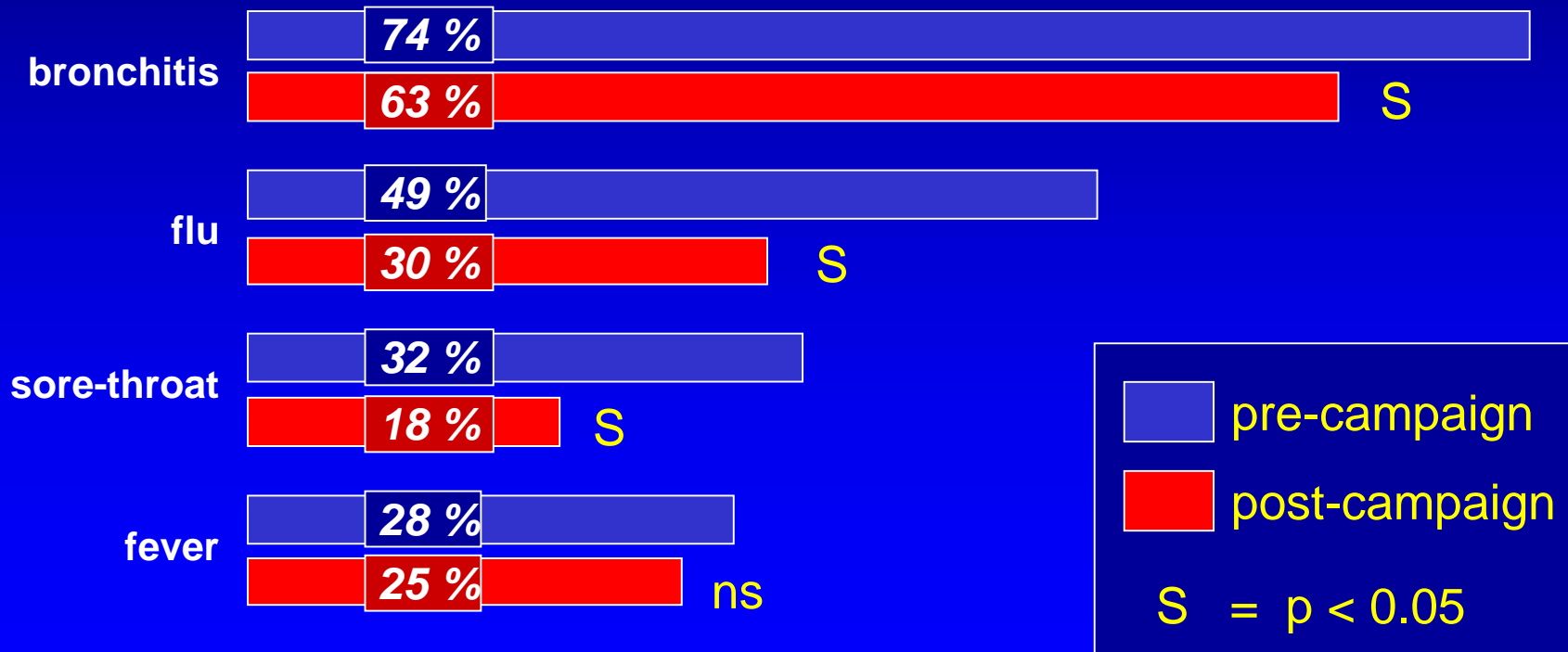
➔ I remember the main message was



Awareness of the public

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 :



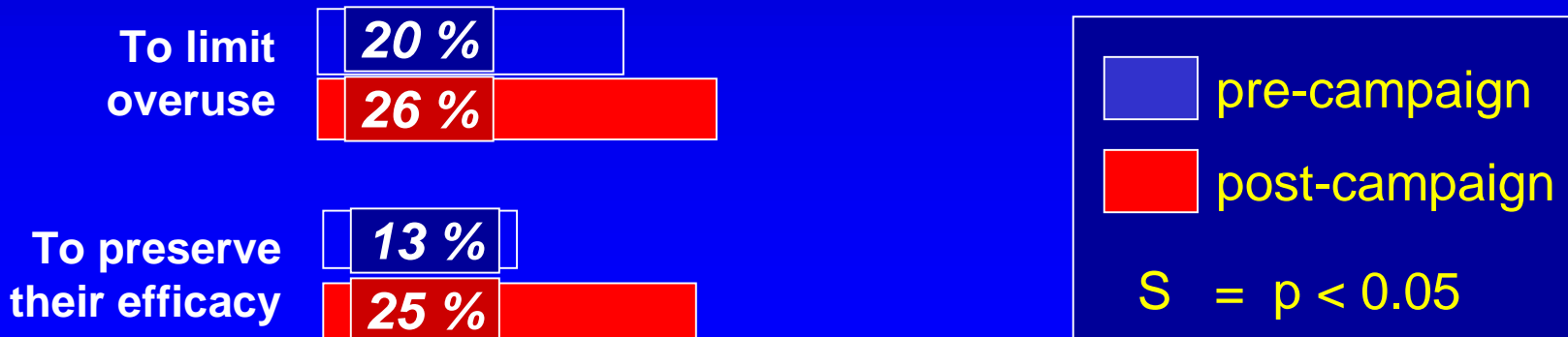
Awareness of the public

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 ?

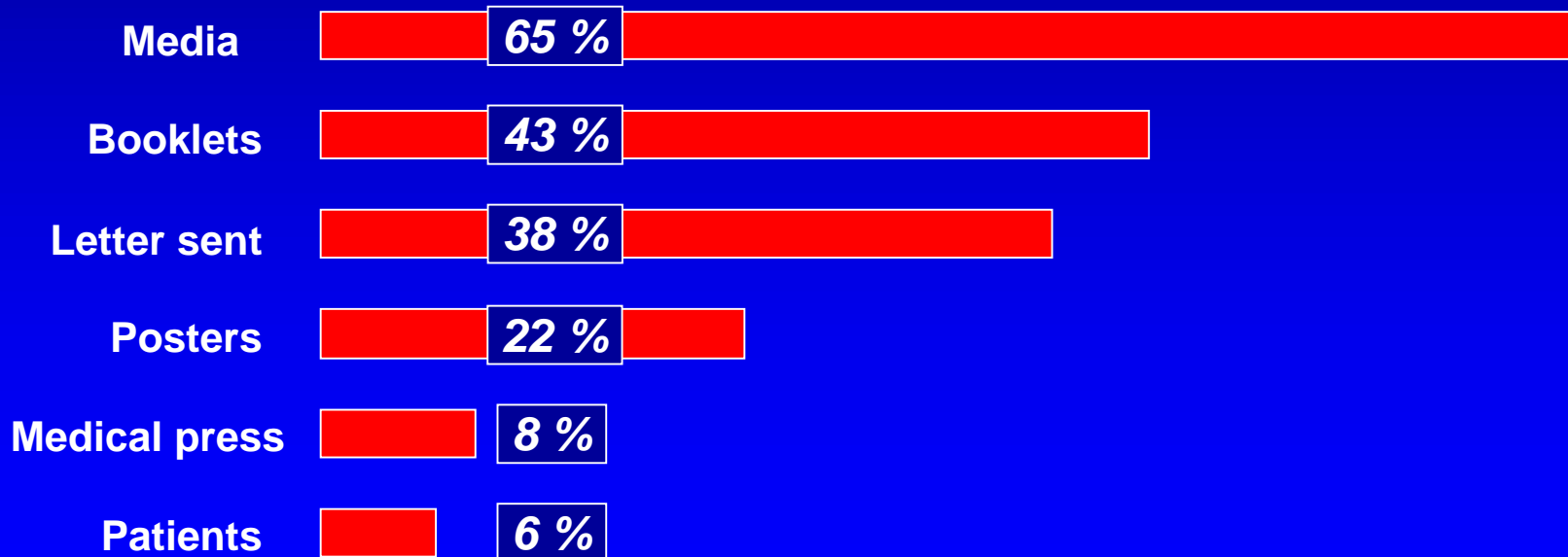


Appreciation of the General Practitioners

Method :

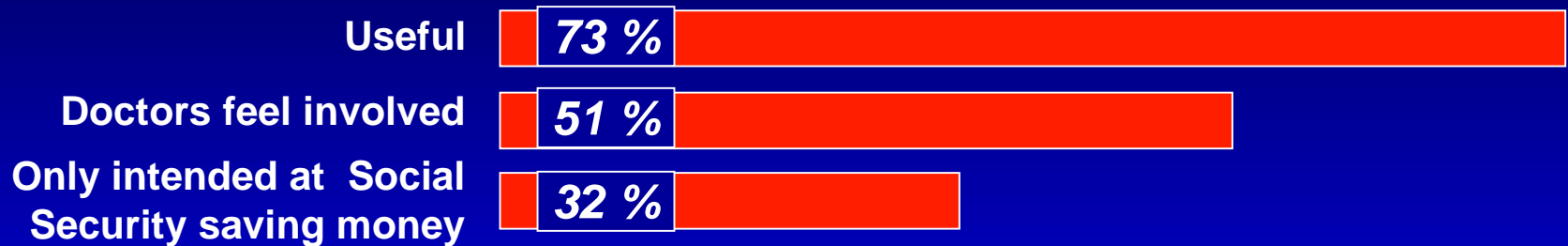
- telephone interviews (n=400; representative of all regions)
 - 3 months after end of the campaign
-

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



Appreciation of the General Practitioners

What do they think about the campaign ...

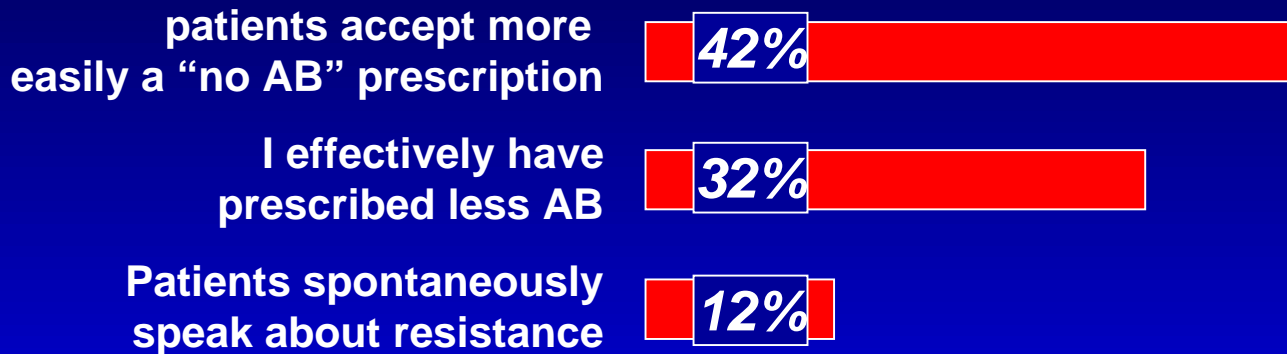


What do they remember ...

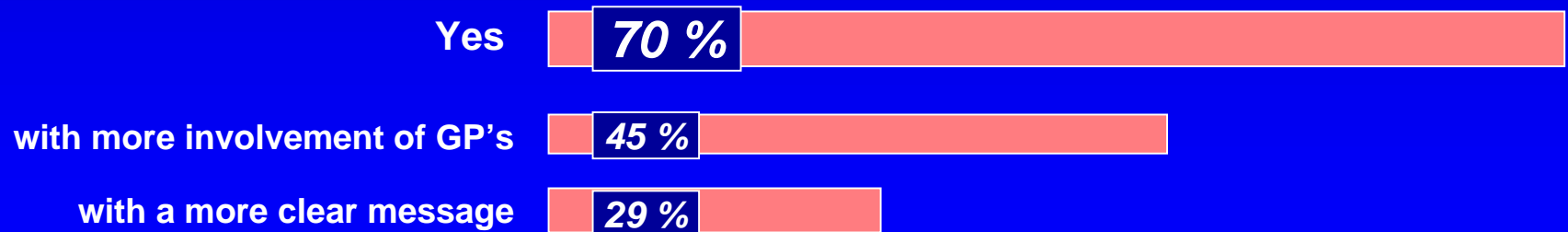


Appreciation of the General Practitioners

30 % of the GPs have seen changes in their practice



Should the campaign be repeated next year ?

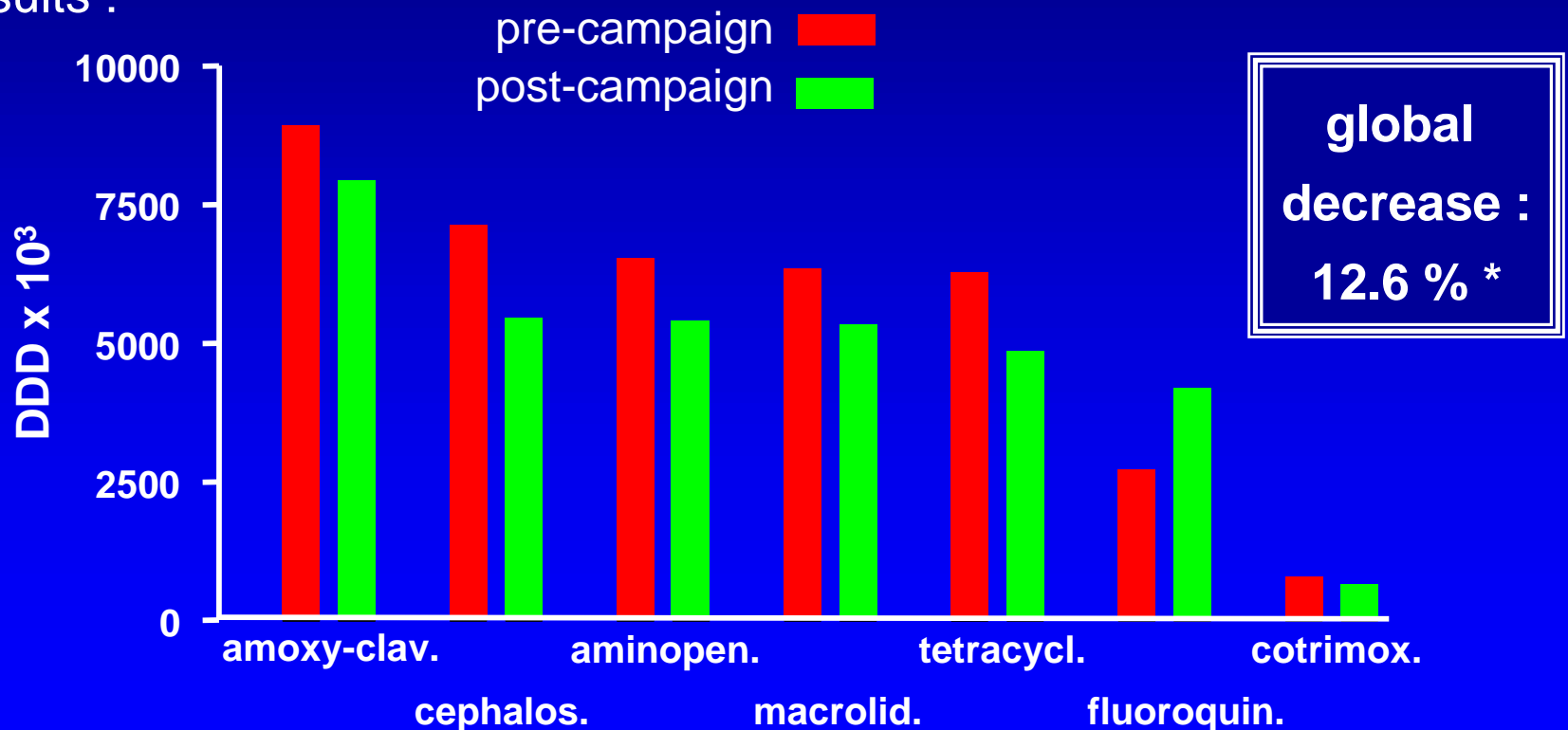


Changes of AB sales in the community (1 of 3)

Method (first [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 :



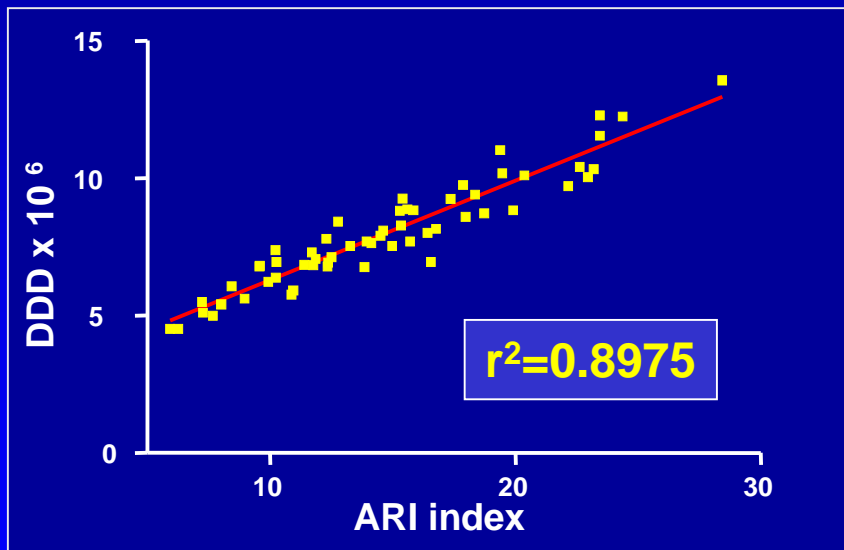
* accounting for 97.7 % of total antibiotic outpatient sales

Variation of AB sales in the community (2 of 3)

Method (2d approach): AutoRegressive Integrated Moving Average model (ARIMA)

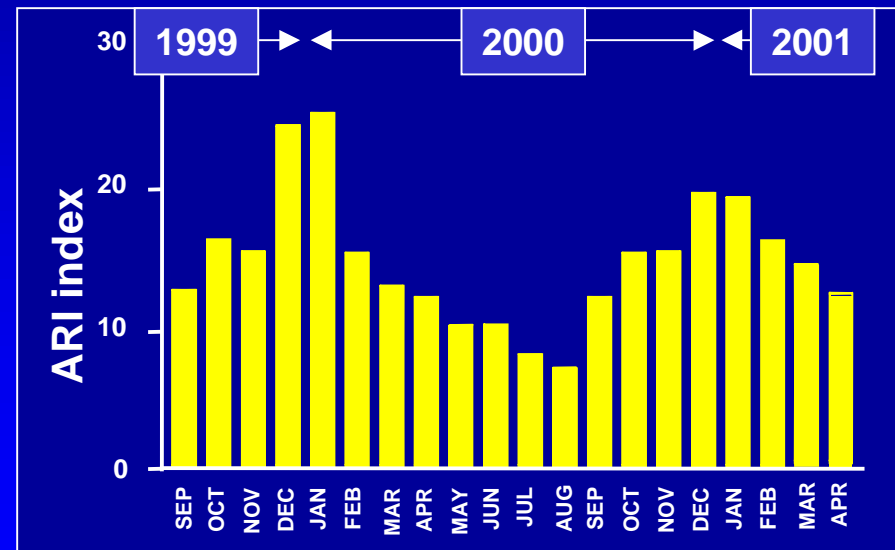
- pre-campaign data (1996 - Nov 2000) to examine the influence of seasonal variations of Acute Respiratory Infections (**ARI**) incidence on antibiotic use
 - establishment of predictions for Dec 2000 - Mar 2001 (campaign period)
- ➔ **Deviations from predicted values will assess the effectiveness of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

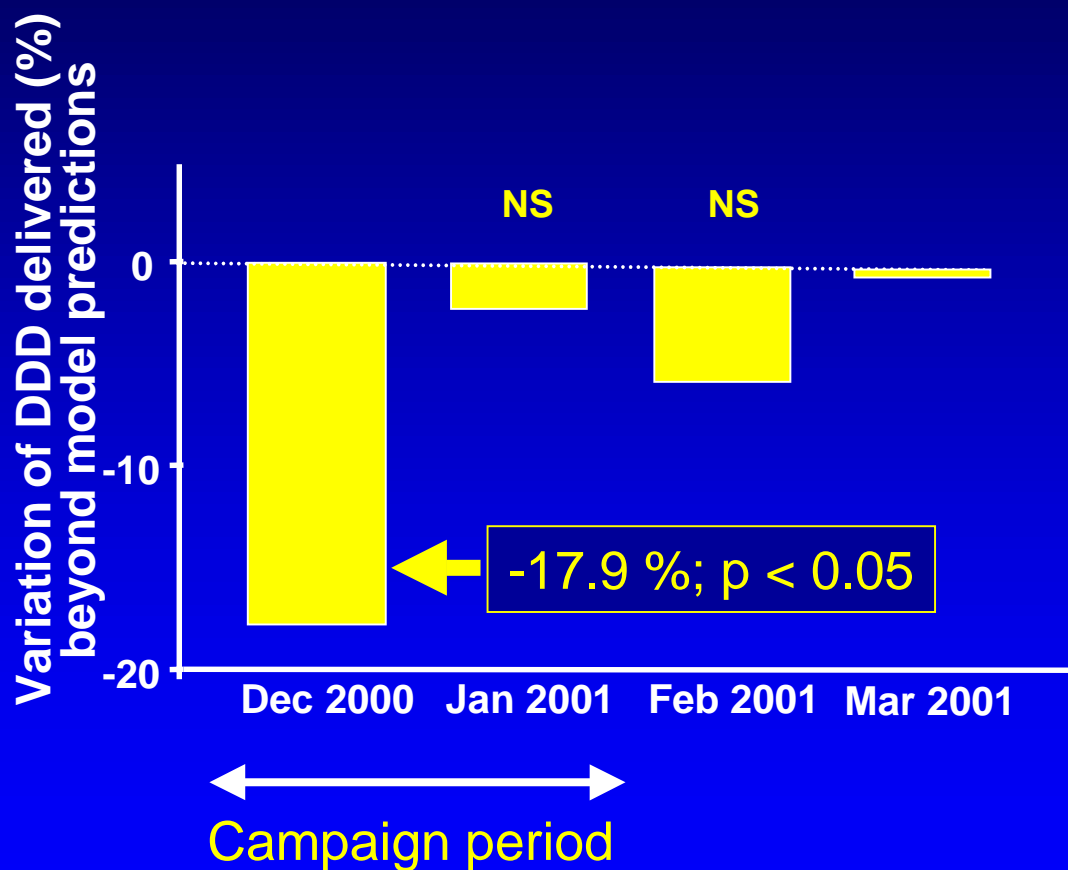
Variation of ARI index during the Sep 1999 - Apr 2001 period



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

Variation 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



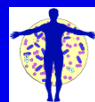
- the campaign caused an immediate and highly significant decrease of AB sales
- this decrease
 - cannot be explained by the lower incidence of ARI in 2000-2001
 - is very transient
- the overall 4-month decrease remains significant ($p = 0.039$)

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

- Mr F. Vandenbroucke and Mrs M. Aelvoet (Federal Ministers of Social Affairs, Public Health and Environment) and their cabinet members
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- 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