CHANGES IN PRESCRIPTION BEHAVIOUR IN THE FIELD OF ANTIBIOTICS AND ANTIHYPERTENSIVES

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WORKING DEFINITIONS

DDD "Defined Daily Dose"
(WHO Collaborating Centre for Drug Statistics Methodology)

The basic definition of the unit is :

The DDD is the assumed average maintenance dose per day for a drug used for its main indication in adults.

DDA "Daily Dose of Administration"
(Belgium)

To be compared with the ADQ (average daily quantity)

- New average standard dose that fits best to the Belgian prescription practice
- Defined for each pharmaceutical presentation (identified in Belgium by its CNK-code)
- Based on the most likely number of daily administrations of the galenic form, depending on the dose used for the principal indication (based on the leaflet)

Specialty Substance	DDD (mg per day)	dose per administration (mg)	number of administrations per day	DDA (mg per day)
Amoxicilline	1000	500	3	1500
Amoxiclav	1000	500	3	1500
Augmentin®	1000	875 1000	2 2x2	1750 4000
Zinnat®	500	250 500	2 2	500 1000
Ceclor® cpr (retard)	1000	375 750	2 2	750 1500
Ceclor® pulv	1000	250 500	3 3	750 750
Cefadroxil	2000	500	3	1500
Dalacin®	1200	300 600	3 3	900 1800
Ciprofloxacine	1000	250 500 750	2 2 2	500 1000 1500

ANALYSIS

As no statistical definition of a change in trend had been given a priori, different smoothing techniques were used to display the evolution.

- moving sum
- moving average
- LOESS (locally weighted linear regression)
- presentation of data : monthly, quarterly, annually

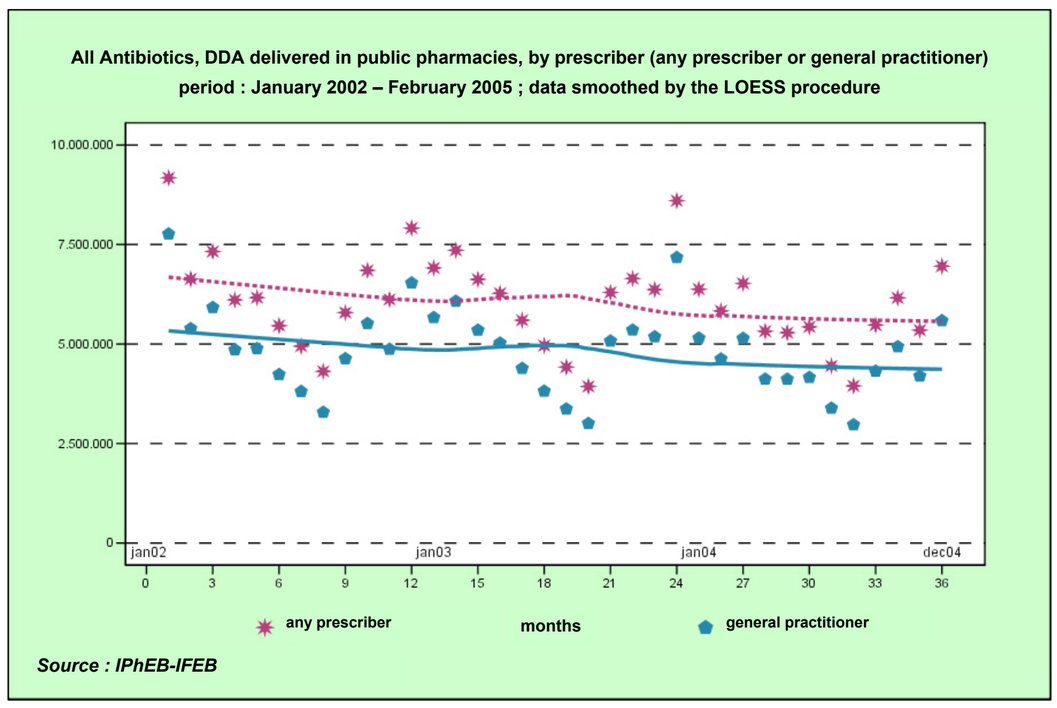
The measure of trend in antibiotic prescription took into account the Acute Respiratory Illness (ARI) and Influenza Like Illness (ILI) indexes (weekly indices converted into monthly averages) [1].

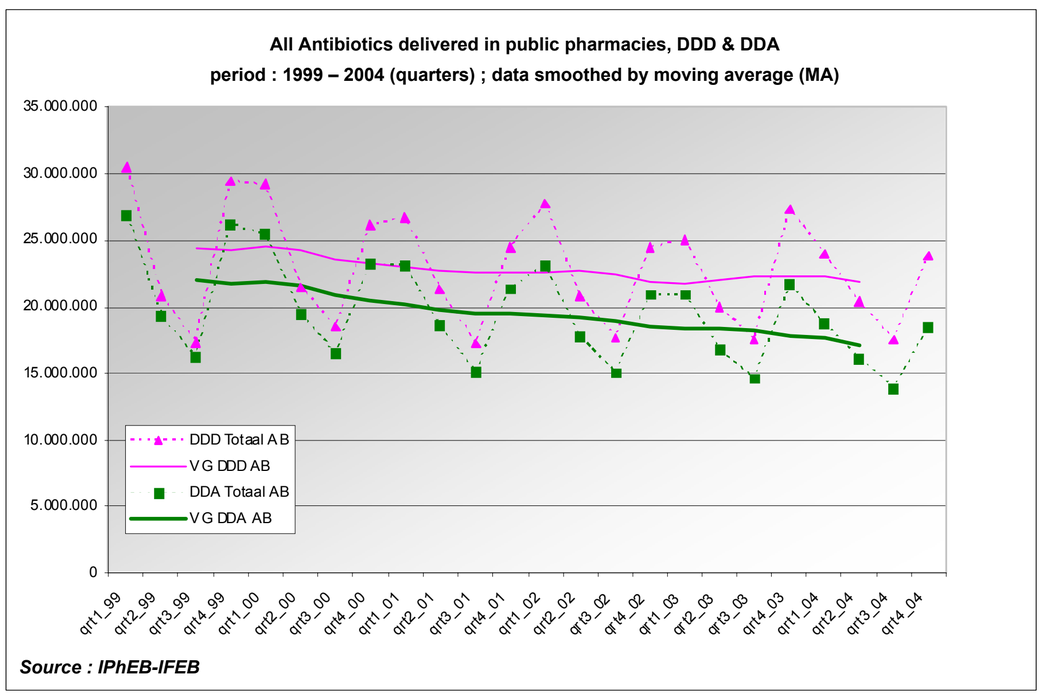
RESULTS

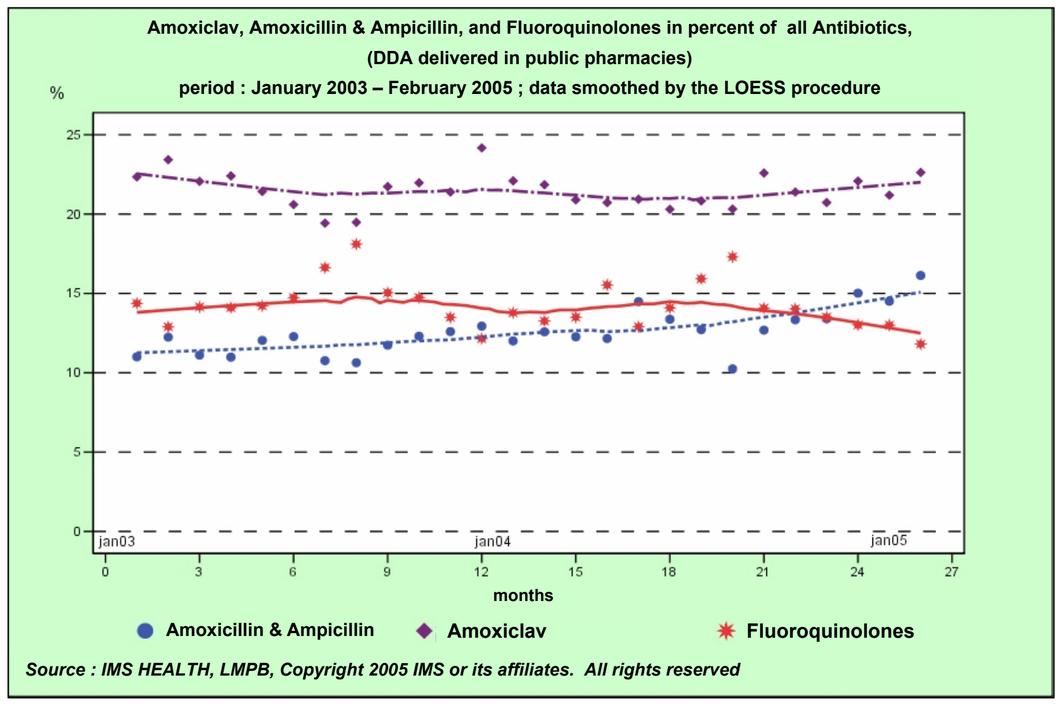
Regarding **antibiotics**, a general change in prescription behaviour was confirmed: overall consumption has steadily decreased since 1999, the prescription of fluoroquinolones, initially increasing, has substantially lowered in 2004.

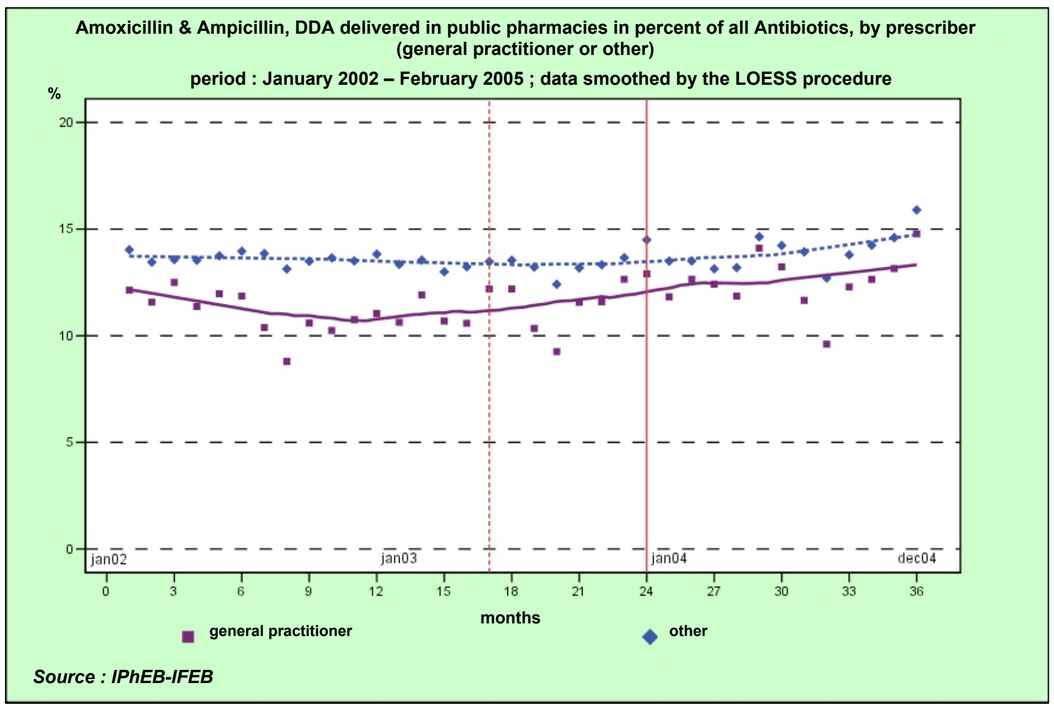
Taking into account the increase of the recommended daily doses, it can be stated that the number of prescribed penicillin combinations, incl. beta-lactamase inhibitors has lowered, and that there is a trend towards a better compliance with the recommendations regarding amoxicillin and ampicillin. This becomes more visible if DDA rather than DDD are used as a unit to measure prescription volume.

This result is obtained by taking into account the weekly ARI and ILI- indices.









1 Bauraind I, Lopez-Lozano JM, Beyaert A, Marchal JL, Seys B, Yane F, Hendrickx E, Goossens H, Tulkens PM, Verbist L. Association between antibiotic sales and public campaigns for their appropriate use JAMA. 2004 Nov 24;292(20):2468-70

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