Implementing a benchmarking model for expenditures of prescription drugs in Austria

Heiderer B., Ortner T.

Main Association of Austrian Social Insurance Institutions

birgit.heiderer@hvb.sozvers.at
thomas.ortner@hvb.sozvers.at

Objective

Since 2005 Austrian regional sickness funds have been facing an increase in drug prescription costs of 7-8 % per year. In order to analyze these costs we developed a benchmarking system comparing drug prescription costs for 2007 of the regional sickness funds including two ratios split into a price and a volume component. Calculating the ratios at the high aggregate of the second ATC level revealed problems: The total savings potential seemed unrealistically high and could not be traced back to a specific field of action. Therefore, the need for a re-design of the benchmarking system was more than necessary.

METHODS

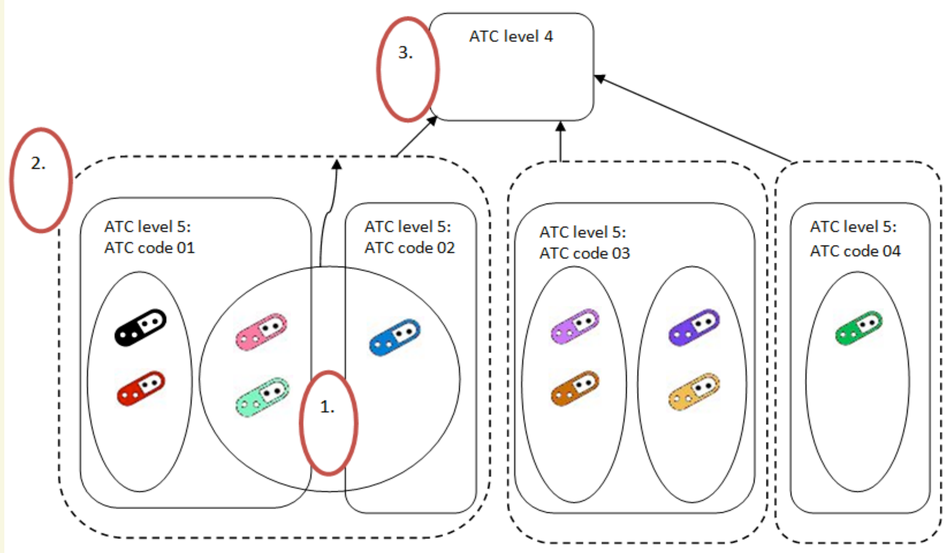

Figure 2

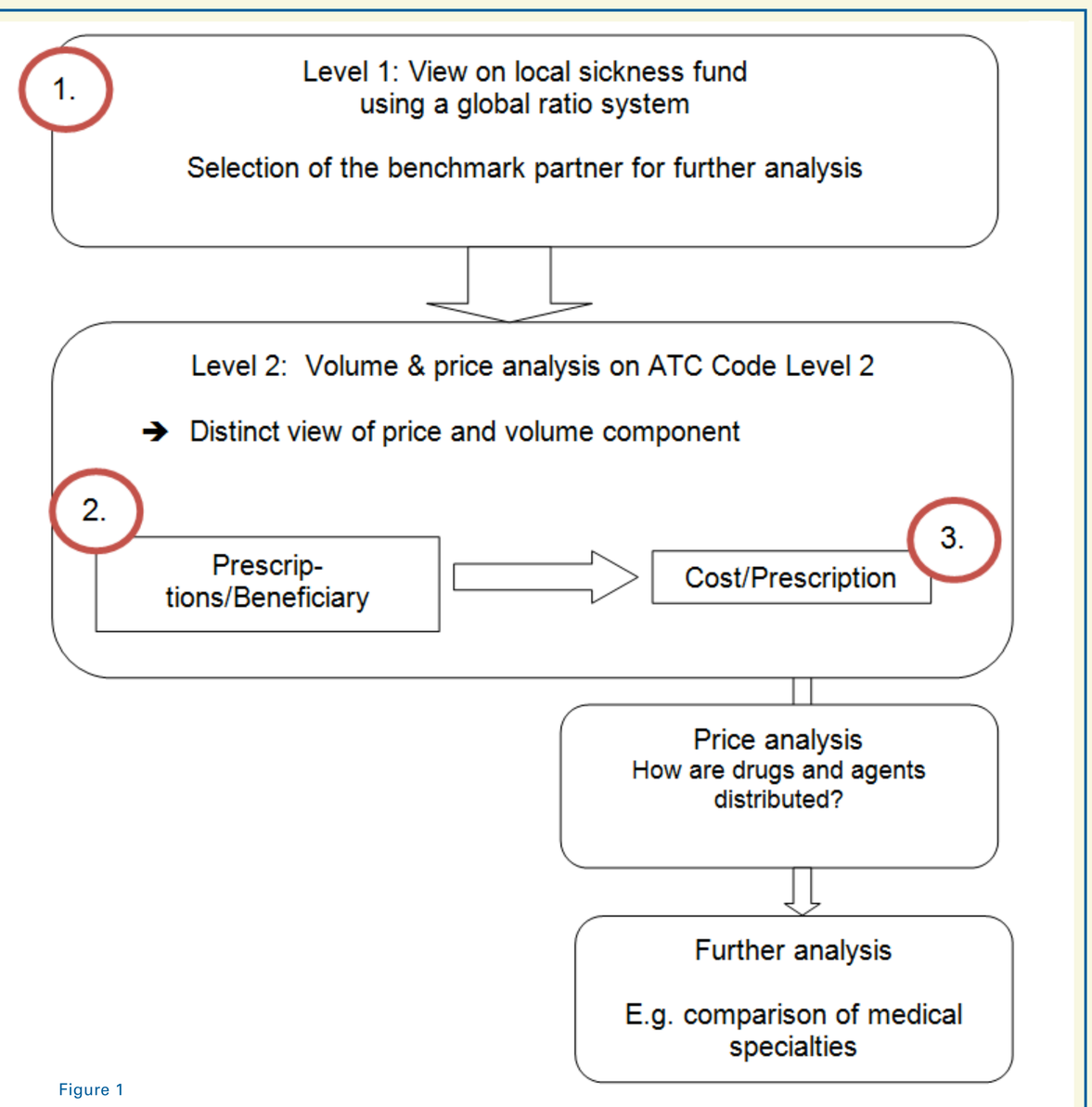

Figure 1

The first step is a ratio system describing the positioning and development of the sickness funds. The main ratio of the system contains costs per beneficiary, which are broken down into a price and a volume component. The sickness fund with the lowest costs per beneficiary represents the benchmark partner. Considering the price and volume component the sickness funds are classified as clusters. These clusters are important to guarantee the comparability of the initial situations of observed sickness funds.

The price component is the main focus of the analysis. To receive comparable savings potentials per beneficiary the volume component of each sickness fund needs to be normalized to the average level of prescriptions per beneficiary (ATC level 3), considering the funds` distributions of prescriptions in lower ATC levels. After this process the price analysis is initiated.

Since the cost-function is interpreted as a function of the distribution of prescriptions, price effects can be shown by adjusting this distribution, shifting prescriptions from specific drugs to others within a cluster. The process of clustering (figure 2) starts with substitutable drugs according to the national eco-list. After that these clusters are combined to groups at first ATC level 5 and then ATC level 4. Within these groups the distributions of the funds are adjusted to the benchmark's distribution.

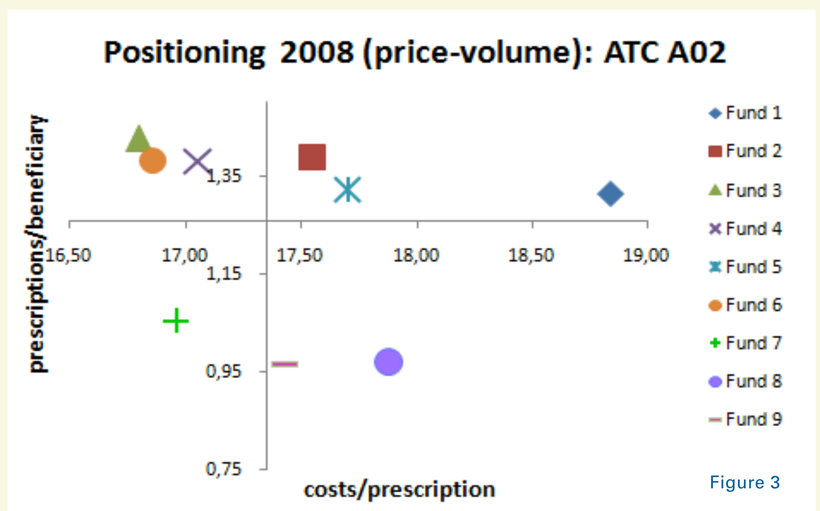

Figure 3

RESULTS on example of drugs for acid related disorders (ATC A02)

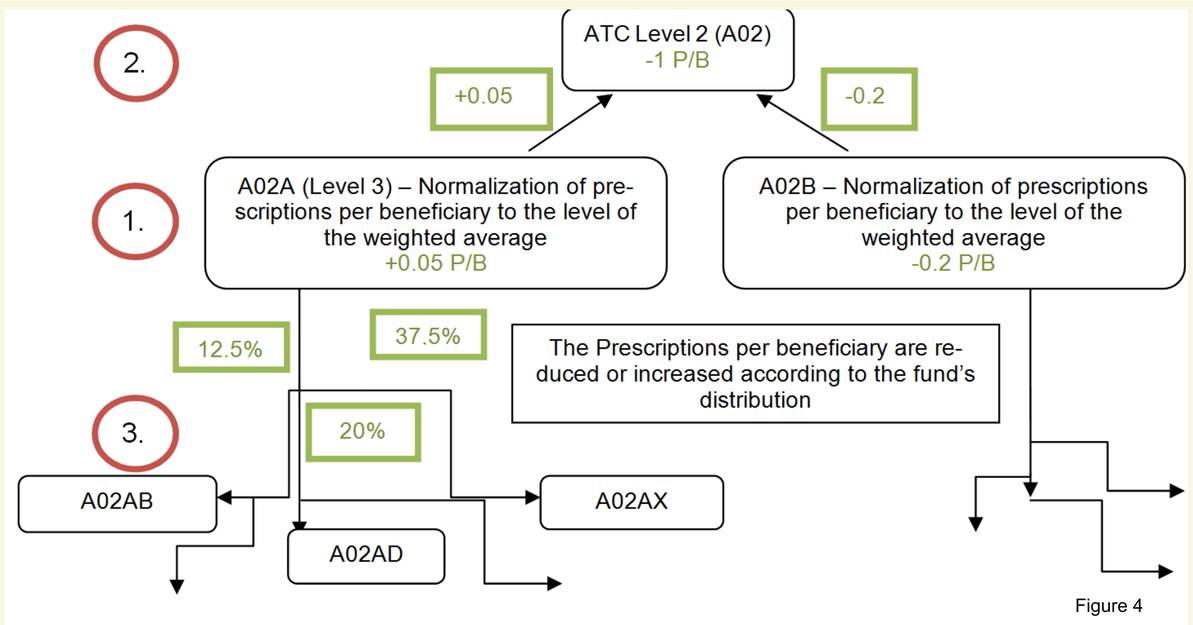

Figure 4

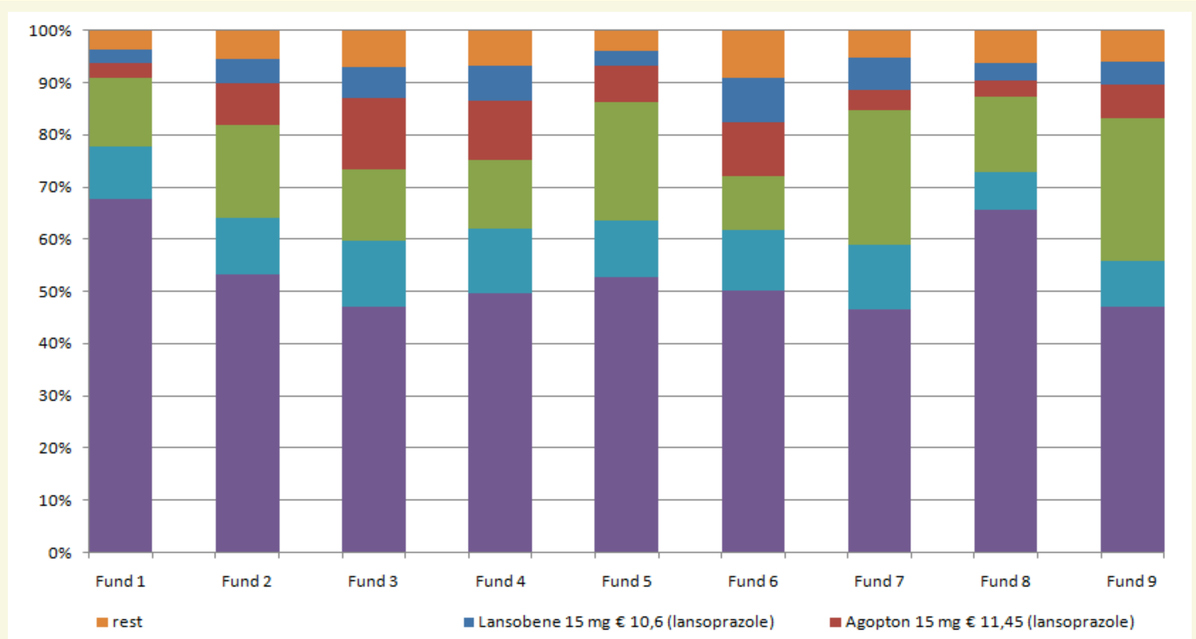

Figure 5

Volume component

Figure 4 shows the impact of the volume normalization for one regional sickness fund on the example of drugs for acid related disorders (A02).
The differences in the amount of prescriptions per beneficiary after normalization vary from -22% to +34%. This leads to a change in costs per beneficiary from -5€ to +5.5€, what is consistent with the percentage change of the volume component. An interesting aspect of our analysis was that sickness funds with similiar positioning (figure 3) do not have similiar changes in costs per beneficiary. This can be traced back to differences between the sickness funds on lower ATC-Code levels.

Price component

The bars in figure 5 show different achievable distributions of drug prescriptions within a group of the national eco-list. One of these distributions – in our case Fund 6 – represents the best practice indicated by the lowest costs per prescription within this group. Therefore Fund 6 is the benchmark partner for the other funds. Adjusting the distribution to the benchmark partner`s distribution decreases the costs per prescription to the level of Fund 6. This leads to a savings potential from -0.9% to -10%.
The adjustment on ATC-level 5 reveals similar savings potentials, whereas adjustments on ATC-level 4 do not have any effect .

CONCLUSION

The method provides a detailed, step-by-step analysis and allows to identify – combined with medical quality assurance – possible fields of action.
The method allows to calculate savings potentials primarily on the price component. However, one can not realize the calculated savings potentials by introducing few measurements, because they are too wide-spread among the different ATC-codes.
Figuring out a wider variance in the volume component "prescriptions per beneficiary", we presume that there are higher savings potentials. Therefore it is necessary to develop a more detailed analysis of this component.