
Defined daily doses (DDD) or prescribed daily doses (PDD): Tools for Controlling Drug Costs?

Analysis of outpatient medical care within the context of pharmacotherapy consultations and economic analysis in accordance with Social Security Code V when applying defined daily doses (DDD)

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Definition defined daily dose (DDD)



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Defined Daily Doses (DDD) or Prescribed Daily Doses (PDD): Tools for Controlling Drug Costs?



Definition

What is a defined daily dose (DDD)?

- "A DDD is the assumed average maintenance dose per day for a medicinal product used for its primary indication in adults."
- Originator: WHO Collaborating Centre
- Valuation methods: Mean of the applied dosage recommendations, also of different pharmaceutical forms



World Health Organization

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Purpose

What is the purpose of a DDD?

- Intended as a **statistical tool** for scientific investigation of drug consumption
- Now **used increasingly** in Germany for **comparing the prices** of pharmaceuticals, e.g. as part of **pharmacotherapy consultations** and **economic analysis** in medical practice (legal foundation: SGB V (Social Security Code Book V)).



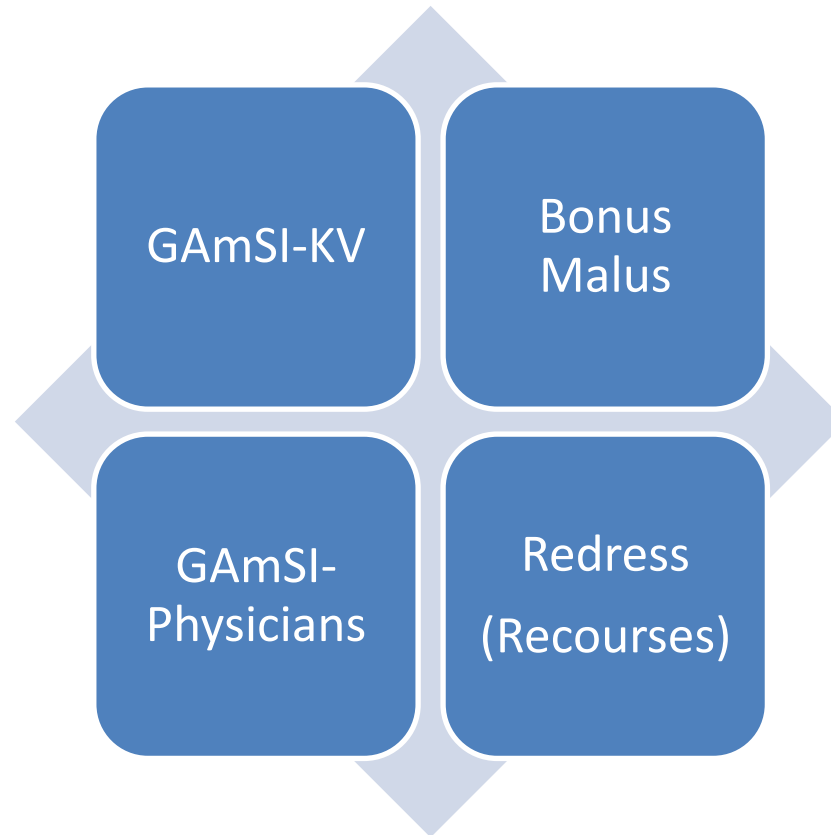
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Purpose

Pharmacotherapy
Consultation Utilisation
review

Examples of
using DDD in
Germany



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Purpose

Using DDD – Examples of consultation:

- "GAmSI-KV": Statutory Health Insurance project for rapid monthly information on drug prescribing in one region – received by every regional association of SHI-accredited physicians (german: KV)
- "GAmSI-Physician": Individual medical reports inform SHI-accredited physicians of their prescribing spectrum eight weeks after a particular prescribing month

GAmSi | GKV
Arzneimittel
Schnellinformation



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Purpose

Using DDD – Examples of utilization review:

- „Bonus/Malus“: In 2007, the average costs per daily dose, deduced from the DDD system, were used as a newly introduced bonus/malus rule to investigate the cost-effectiveness of the prescribing behaviour of SHI-accredited physicians
- „Redress“ (Recourses): Health insurance funds also use the DDD when making price comparisons in legal proceedings (e.g. NRW)



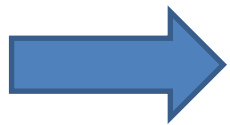
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Purpose

Using DDD – does it make sense?

- Though the WHO is sceptical about using the DDD as a gauge for costs, price calculations and reimbursement, it has found a place in German social security legislation and is applied therein, especially, as a means of price comparison.



Does the DDD system truly reflect "therapeutic reality"?

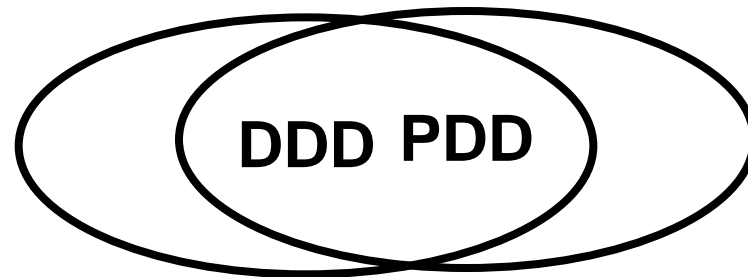


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Aim of the study

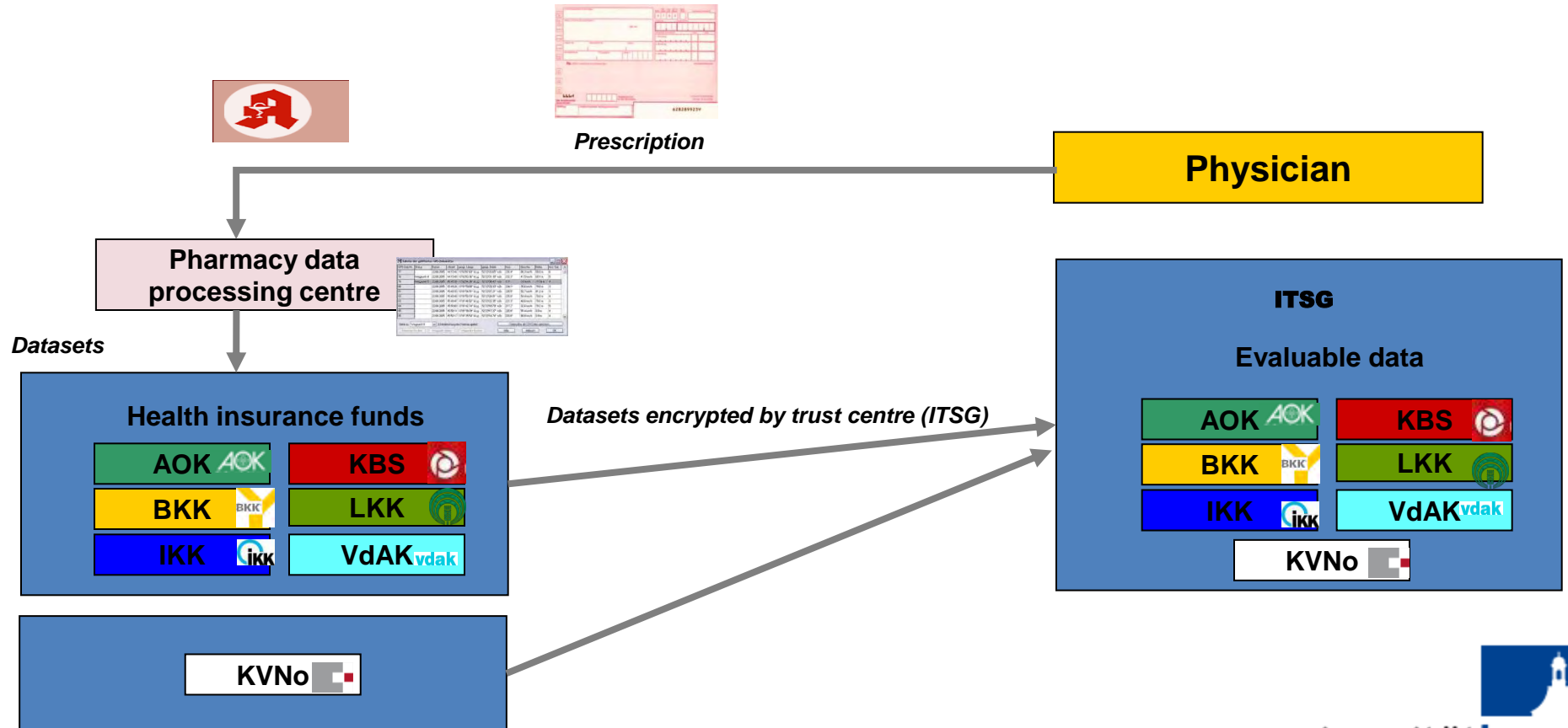
- To compare the DDD system with therapeutic reality (prescribed daily dose, PDD)



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Data source and data protection

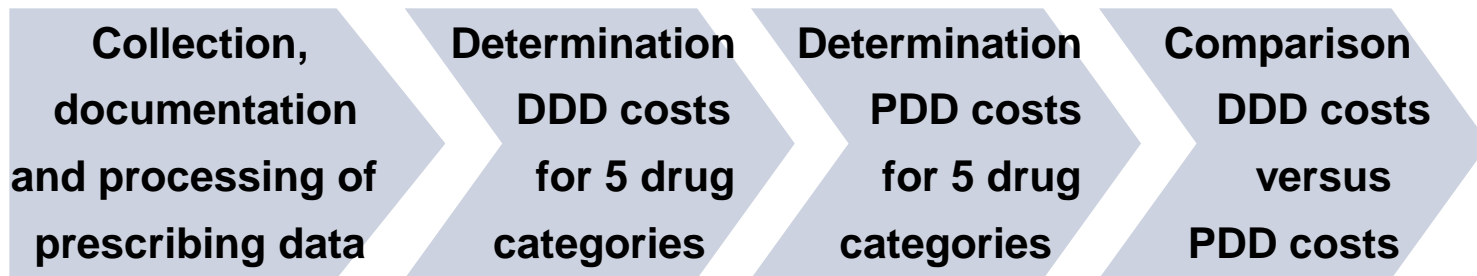


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Implementation

Four-step implementation:



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Implementation

Analysis deviation DDD/PDD costs:

Per drug category and active substance:



at regional level



at physicians' level



at patients' level:

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Implementation


- Estimation of the consequences of using DDD and PDD as the underlying measure for material and financial assessment of the pharmaceutical care level
- Discussion and development of proposals for greater differentiation when considering drug costs during pharmacotherapy consultations and economic analyses in accordance with SGB V

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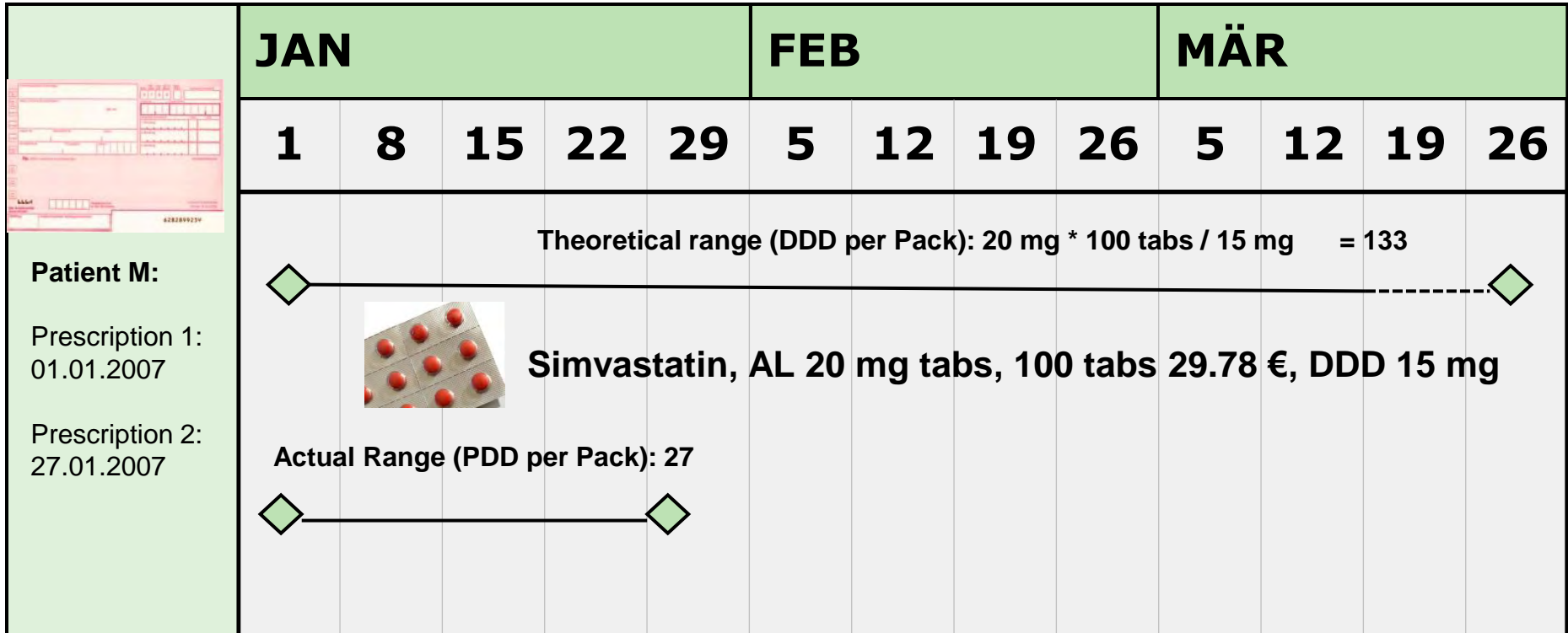
Results

The following drug categories were studied:

-  HMG-CoA reductase inhibitors (statins)
-  Alpha-adrenoceptor antagonists (alpha blockers)
-  Selective serotonin reuptake inhibitors (SSRI)
-  Selective beta-adrenoreceptor antagonists (beta-blockers)
-  Bisphosphonates

Prescribed by physicians in general practice, internal medicine, neurology, orthopaedics or urology

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Results

Example, patient M.:

Simvastatin, AL 20 mg tabs, 100 tabs 29.78 €, DDD 15 mg

DDD per pack (theoretical range): $20 \text{ mg} * 100 \text{ tabs} / 15 \text{ mg} = 133$

PDD per pack (actual range): days until next prescription = 27

DDD costs : costs per pack / DDD = 0.233 €

PDD costs: costs per pack / PDD = 1.097 €

PDD: $20 \text{ mg} * 100 \text{ tabs} / 15 \text{ mg} = 73.66 \text{ mg}$

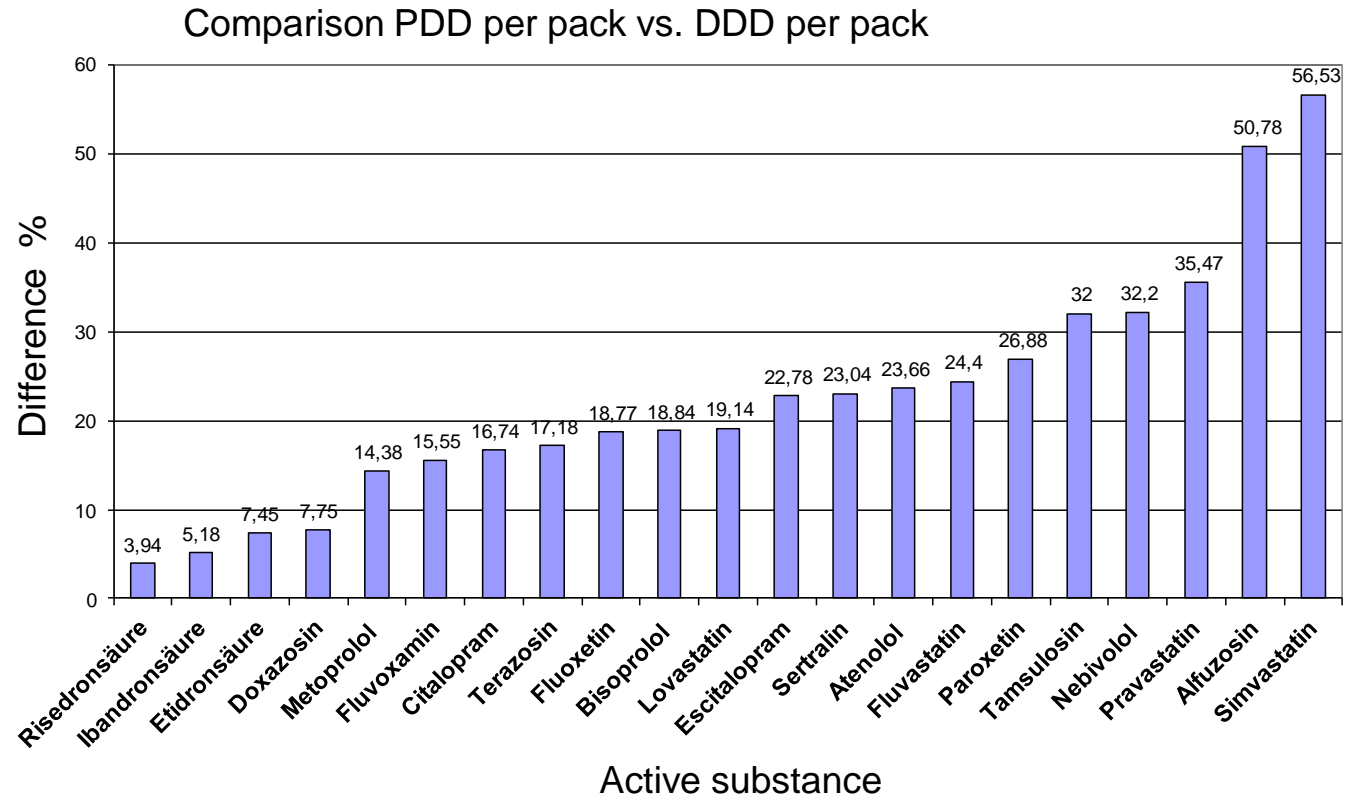
 PDD per pack sometimes differs considerably from the DDD per pack

 Overdose, duplicate prescription or patient collects prescription too soon

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Results



Defined Daily Doses (DDD) or Prescribed Daily Doses (PDD): Tools for Controlling Drug Costs?



Results

In the case of **17** active substances for which prescriptions were available, the average PDD per pack is lower, i.e. the actual range of a product is smaller than that assigned theoretically by the DDD of a product

Only in the case of the **4** active substances terazosine, bisoprolol, doxazosine and fluvoxamine do the prescribed products last longer than theoretically defined.



PDD, PDD per Pack and PDD costs vary

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Results & discussion

What does that mean?

Because cost comparisons on the basis of DDD could now pose a direct risk to SHI-accredited physicians or in terms of redress, there is a need for action: namely to adapt the DDD system to therapeutic reality.



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Thank you for your attention!
Questions?

