

## Medicines statistics are important – make sure ATC and DDD are in place!



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**I**n 1994 I served as a pharmacist in the UN forces in Bosnia. We had to make an inventory of the medicines we had in stock. Making an inventory serving 18 different nations was a challenge. Using brand names was out of the question. Using an alphabetical list of generic names also proved difficult. Therapeutically very similar products came very far apart (cetirizin/loratadin, enalapril/lisinopril, atenolol/metoprolol). Generic names were different (adrenaline/epinephrine, paracetamol/acetaminophen) or spelled differently (codeine/kodein, acyclovir/aciklovir). For the combination paracetamol/codeine the additional question was: which substance first?

So we chose to use the Anatomical Therapeutic Chemical (ATC) classification system, which is recommended by WHO. Then to my surprise I discovered that many nations had not even heard of ATC.

The *Rote Liste* in Germany does not mention ATC. The British National Formulary, does not contain a word about ATC. Neither does the recently established *Dictionary of Medicines and Devices*, from the Prescription Pricing Authority in the UK. *Martindale: The Extra Pharmacopoeia*, is the only internationally-aimed medicine information database that has implemented ATC. *DrugDex* from Micromedex, Thomson Healthcare, is weak on names and synonyms, and does not refer to ATC. This contrasts sharply with its aspiration to become the most extensively used international database on medicine information for health professionals.

Several important European health and medicine authorities do not make money available for, or even pay lip service to, an international classification system for medicines. It seems that larger and richer nations with (too well-)established health systems feel no need to look beyond their borders in this matter. I will mention France, Spain and the UK, in Europe; and globally, the FDA in the US is the most important example.

But enough about inventories, formularies and medicine information databases. The absence of ATC in many countries makes international medicine statistics an equally sad affair. In order to measure drug use, it is essential to have both a classification system and a unit of measurement. After the patent expired the price of Simvastatin dropped more than 90%. In such a situation expenditure does not tell us much about use. So economic statistics are not only one-dimensional, but may be directly misleading. Since 1981, the WHO Regional Office for Europe has recommended the ATC classification system and the Defined Daily Dose (DDD) as the

standards to be used in drug utilisation studies. Since 1996 this methodology has been adopted by WHO headquarters for global use.

The European Surveillance of Antimicrobial Consumption (ESAC), is an institution that has experienced a lack of harmonisation [1]. One could hope that the growing problem of antibiotic resistance might open the eyes of national medicines authorities a little to the need for international statistics on medicine sales or even consumption.

The ATC/DDD, for instance, ICD-10 is part of the WHO Family of International Classifications [2]. It is maintained and developed by the WHO Collaborating Centre for Drug Statistics Methodology in Oslo, Norway [3].

The EURO-MED-STAT project has recommended that each Member State should develop a national register of medicinal products available on the national market that is correctly linked to the ATC codes and DDD values. The EURO-MED-STAT project has decided on a minimum data set to be recommended for European harmonised lists of medicines, suitable for incorporation into harmonised drug utilisation monitoring systems and capable of producing data which permit validated comparisons at the European level. The recommendation emphasises the importance of validating the link between the national drug register and ATC/DDDs [4].

Nowadays many health software systems are being revised or established. In a situation where many health authorities are absent, I urge hospital pharmacists to do it locally. Please contact system owners and developers and make them understand that implementation of ATC/DDD is essential. If we do not adopt an international system we have no way of comparing, even talking about, drug use between countries.

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### References

1. [www.esac.ua.ac.be/](http://www.esac.ua.ac.be/)
2. [www.rivm.nl/who-fic/](http://www.rivm.nl/who-fic/)
3. [www.whocc.no/atcddd/](http://www.whocc.no/atcddd/)
4. [www.euromedstat.cnr.it/publications/pdf\\_papers/IJPH\\_recommendations.pdf](http://www.euromedstat.cnr.it/publications/pdf_papers/IJPH_recommendations.pdf)