History of Development and Usage of Pharmaceutical Pictograms in Czechoslovakia

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Changes in pharmacy practice

- Pharmacy activities and pharmacists’ role significantly changed in 20th century
- Decreasing number of medicines compounded at pharmacies, increasing number of mass-produced medicines
- A lot of new drugs appeared, the knowledge on medicines grew as well
Changes in pharmacy practice

• A need to instruct patients how to use medicines correctly (administration, side effects, drug-food or drug-drug interactions) has emerged

• **Aim:** higher effectivity and safety of pharmacotherapy
Changes in pharmacy practice

• Pharmacist – a producer of medicines became a distributor of mass-produced drugs and then a distributor of information on all aspects coupled with medicines
• New approaches and devices to simplify pharmacist’s new role had been investigated
• Workers of Faculties of Pharmacy and Pharmacy Development Centre (PDC) were engaged in this topic in former Czechoslovakia
Developement of Pharmaceutical Pictograms

• 1977 – Smečka, Neuwirth et al. (Faculty of Pharmacy of Charles University) published an intention to use special pictorial symbols – pharmaceutical pictograms – to express information on medicines

• The information repeat and can be expressed briefly by combination of appropriate pictograms
Development of Pharmaceutical Pictograms

- 1978 – Smečka’s team proposed a set of 43 pictograms and discussed their practical usage. They elaborated their work in the next years.

- The pictograms were divided into 6 information groups: instructions for dispensation, use, bans and warnings, storage, interactions, clinical data.
Smečka’s pictograms:
Usage of Pictograms

1. The support of pharmacist’s memory during dispensation

   a) Small cards displaying appropriate pictograms placed on front edges of shelves with drugs in pharmacy
Small card with pictograms:
A shelf with information small cards:
A shelf with information small cards:
Usage of Pictograms

b) An information booklet of PDC published in 1981

- It contained pictographic information about cca 500 medicines and could have been used for rapid information retrieval during dispensation
- Issued as a supplement to “Bulletin of PDC” and distributed to all Czechoslovak pharmacies
- A modified set of 35 pictograms was used
Usage of Pictograms

• The paper booklet was considered as a provisional solution

• Some other possibilities were tested: a card index containing basic pictographic information completed with more detailed written data or microfiche readers
Usage of Pictograms

2. Pictograms for patients

- The next proposed application was to print pictograms on wraps and packings of medicines
- A patient had instructions for proper medicine usage and storage in a simple form
- Only pictograms understandable to patients (13-19 pictograms) could be used and only general information could be displayed
Pictograms understandable to patients:
Packings with pictographic information:
Packings with pictographic information:
Usage of Pictograms

• Only 26% of Czechoslovak mass-produced drugs for oral use contained a patient information leaflet in 1980. The leaflets were/are often hard understandable to patients.
• To use pictograms this way could lead to better usage of medicines too.
Usage of Pictograms

• The Smečka´s pictograms attracted attention abroad

• International Pharmaceutical Federation (FIP) repeatedly pursued the pictograms. FIP considered to use pictographic information especially for illiterate patients in developing countries
Usage of Pictograms

• The pictograms were publicized in Austria and former Eastern Germany

• Framm utilized a set of 13 Czechoslovak pictograms in his book *Arzneimittelprofile für die Kitteltasche* in 1998 (issued 4 times in Germany, Czech version in 2002, the book was published also in Poland and Hungary)
Conclusion

• In spite of all effort, the pictograms were almost not used in Czechoslovakia.

• Several papers and diploma theses concerned pictograms were published in Czechoslovakia and abroad. This endeavour can be considered as an important step to intensify pharmaceutical consulting at Czechoslovak pharmacies in the 2nd half of 20th century.

• The modified pictograms are still used in some Czech pharmacy information systems.
An example of an information system using the pictograms:
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