DEVELOPMENT OF A REFERENTIAL DRUG DATABASE FOR MULTIPLE SITE USE IN COMPUTERIZED PRESCRIPTION

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BACKGROUND

Computerized physician order entry (CPOE) systems are seen by many as the best way to improve the quality and safety of medication prescriptions. The deployment of a CPOE system (Predimed) was carried out by the Pharmacy Department of the Lausanne University Hospital (CHUV) since early 2003. The need for all care units using Predimed to base prescriptions on identical drug data led in 2005 to the development of a referential drug database (REFMED) for use by pharmacists and medical staff.

Figure 1: Common data validation screen

OBJECTIVE

In 2004, The Federation of Hospitals of Canton Vaud (FHV), which brings 12 regional hospitals and 3 central pharmacies together, decided to implement Predimed. Each regional pharmacy was using its own drug database because of some specificities such as drug formulary, local formulation, alternative treatments…
A unique multiple-pharmacy version of REFMED integrating the common and pharmacy-specific data became necessary to avoid multiple updating of the different CPOE databases.

Figure 2: Pharmacy-specific datasets registration screen

METHOD

The project was conducted in 3 stages:
- Discrimination between common and pharmacy-specific datasets
- Data configuration of all common datasets by CHUV pharmacists, and of the pharmacy-specific datasets by regional pharmacists
- Updates, tests and data-export into Predimed databases

1. Galdat® update folder (Swiss commercial drug database)
2. Common data validation and Pharmacy-specific datasets registration
3. Daily generation of export folders (one for each pharmacy)
4. CPOE medication databases update

RESULTS & DISCUSSION

- All common datasets including drug characteristics, prescription units, route of administration (Fig. 1) and pharmacy-specific datasets including drug formulary, local formulations, therapeutic equivalents, specific routes of administration (Fig. 2) were formatted and are being updated by the CHUV and regional pharmacists, respectively.
- Since July 2007, all Predimed databases can be updated independently and daily from REFMED using a secured access to the unique referential database (Fig. 3).
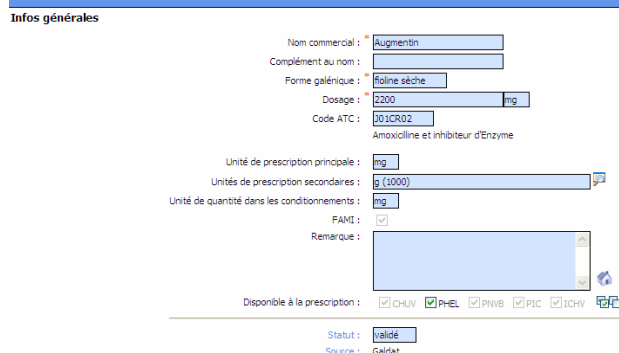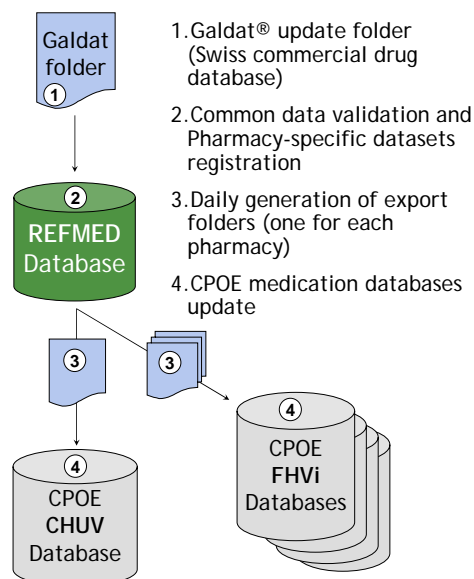
Figure 3: Steps for validation and updates of drug informations in the referential and CPOE databases

CONCLUSION

This project has reached its main objective to have a centrally updated medication referential serving all pharmacies and hospitals using the CPOE system Predimed.
Moreover, the development of this unique referential allowed all pharmacies to provide their drug formulary online and other drug informations for the whole pharmacy, medical and nurse staff (Fig. 4).
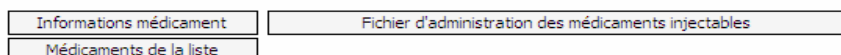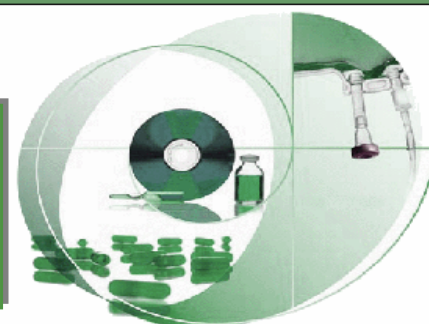

Figure 4: Front Page of the online application for the whole hospital staff