

# A survey-based inventory of clinical decision support systems in computerised provider order entry in Swiss hospitals

Delphine Carli-Ghabarou, Hanna M Seidling, Pascal Bonnabry, Christian Lovis

*Pharmacy, Geneva University Hospitals and School of pharmaceutical sciences, University of Geneva, University of Lausanne, Geneva, Switzerland,  
Department of clinical pharmacology and pharmacoepidemiology, University of Heidelberg, Germany,  
Division of medical information sciences, Geneva University Hospitals, Geneva, Switzerland*

**Questions under study:** Computerised order entry and clinical decision support systems (CDSSs) are considered to be important strategies to safeguard drug treatment. Although their dissemination is nationally enforced in Switzerland, current implementation rates vary. Moreover, types and implementation modes of CDSSs can differ substantially. This study maps the implementation of computerised order entry and CDSSs in Switzerland.

**Methods:** In February 2011, a survey exploring the implementation of computerised order entry and types of CDSS was sent via e-mail to all public hospitals (n = 120) and private clinics (n = 165) registered at the Swiss Hospitals Federation (H+). Nonresponders were reminded three times to complete the survey. Data were analysed descriptively.

**Results:** One-third of all hospitals and clinics responded to the survey (n = 92/285; 32.3%), with 73 institutions agreeing to participate. Of these 73 institutions, 29 prescribed electronically and 13 planned to implement electronic prescribing. Implementation of CDSSs was less frequent, with 14 institutions actually using CDSSs (19.1%) and another 18 institutions planning the implementation (24.6%). The type of CDSS most frequently implemented was information on hospital formularies (n = 13) and drug-drug interactions (n = 11), but CDSSs with regard to genotype, drug interactions with laboratory test results, contraindications, specific age groups and necessary drug orders were only rarely implemented.

**Conclusions:** Although implementation of computerised order entry in Switzerland is increasing, the types and magnitude of CDSSs vary largely and mainly focus on basic decision support